Experience mathematics in an entrepreneurial environment

The second semester of Computing for Mathematics will give students the opportunity to experience mathematics in an entrepreneurial environment. You will form 'companies' of 4 with 1 student to be selected as the **project manager** and another to be the **secretary**. The selection of the roles within a company is to be done by the company members itself.

The goal of every company is to pitch at the end of term explaining the particular 'product' they have designed.

The 'product' must involve programming and mathematics. Students are completely free to tackle this in any way they please (I encourage you to be original) but please do take in to account the marking criteria (report, presentation). Here are some potential ideas:

- Building a system to help locate the Mars Rover;
- A website to explain basic mathematical concepts;
- An interactive exposition of the work of Isaac Newton;
- A database of known primes.

Students are welcome and encouraged to form their own companies but if they are unable to do so then they must let me know so that I can form companies for them.

Students are expected to have at least 1 meeting a week. During these meetings it will be the responsibility of the secretary to ensure that minutes are collected. These meeting reports will form part of the group submission.

The timetable for the 11 weeks of term is shown:

1. Week 1 - Introductory lecture:

   - Setting the scene;
   - Communication and collaboration;
   - What and why of enterprise.

   At the end of this week: all companies must be formed and initial meetings must have taken place.

2. Week 2 - Lecture on library skills.

   Companies should be close to completing their project proposal by the end of this week.

3. Week 3 - Idea to market:

   - The commercialisation process;
   - Creativity and innovation;
   - The market.

   At the end of this week: all companies must submit a 2 page project proposal (assessed).

4. Week 4 - Strategic project management:

   - What is project management?
   - What is business strategy?
   - SWOT analysis.

   At the end of this week: all companies should be working on the code for the project

5. Week 5 - Pitching:

   - What is a pitch?
   - Storyboarding your pitch?
   - Branding.

   At the end of this week: all companies should be working on the code for the project and have a short pitch prepared.

6. Week 6 - Grand Council:

   A meeting of all the companies will take place during which all project managers will deliver a short (<1 minute) pitch about their work so far.

7. Week 7 - 10 Seminars:

   Weeks 7 - 10 will have seminar from mathematicians from industry, the university and otherwise presenting aspects of their work that involve programming.

   During these weeks companies should be working on their code and towards the end start working on their pitch.

8. Week 11 - Pitches:

   Company pitches (assessed)