



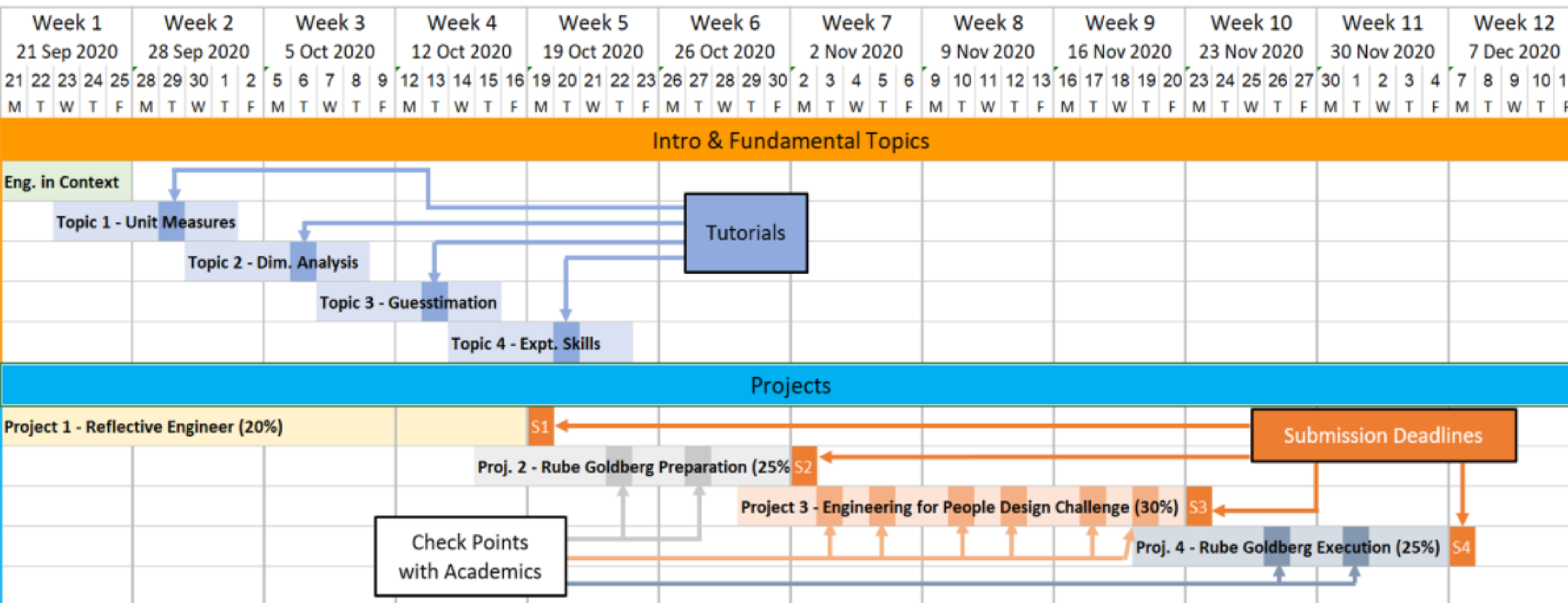
Creating a community of Freshers: A new culture in engineering education

Simone Dimartino, Azwa Iman, Borislava Georgieva
School of Engineering, University of Edinburgh

Azwa and Borislava are 1st year students in Engineering. In this poster they share their experience with the Engineering 1 course, with a focus on their perspective of how a community of 1st year Engineering students was built and supported their 'freshers' year at the University of Edinburgh. **Enjoy!**

Simone Dimartino, Engineering ! Course Organizer

Course Illustration



1. Topics: Starting with lectures on Engineering in context and homing in on our responsibility as global engineers, the course then moved on to key topics used daily by engineers. These included Experimental Skills, Guesstimation and Dimensional Analysis.

2. Projects: After working through the topics, we delved into 4 group projects for the remainder of the semester.

These figures represent the fundamentals behind each project:

Figure 1 illustrates a student's prototype for the Engineering for People Design Challenge that was included in the project report.

Figure 2 shows preliminary student sketches of the Rube Goldberg machine that were then built for the last project.

Figure 3 depicts an example of the execution of the Rube Goldberg Machine.



Figure 1

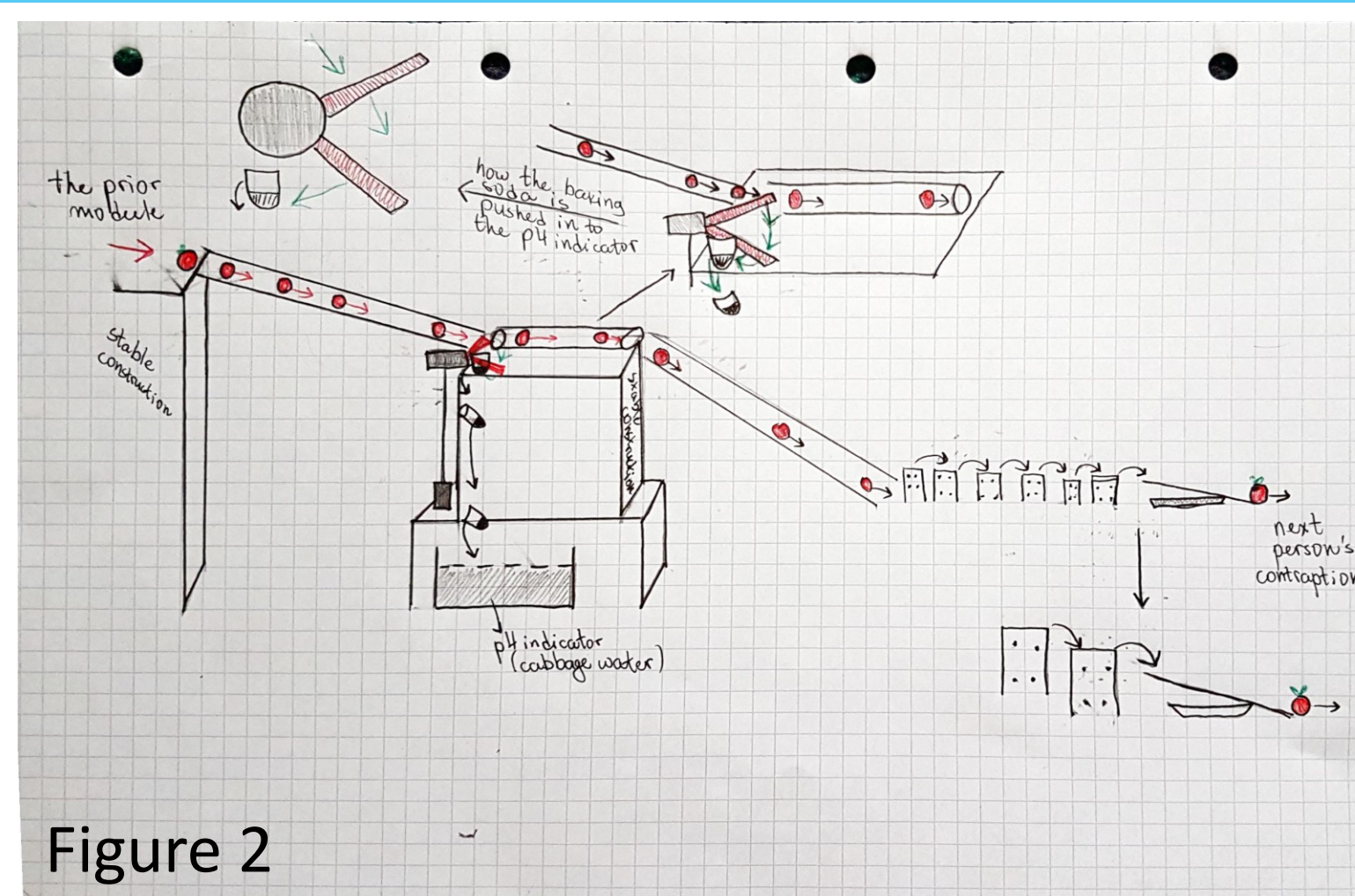


Figure 2

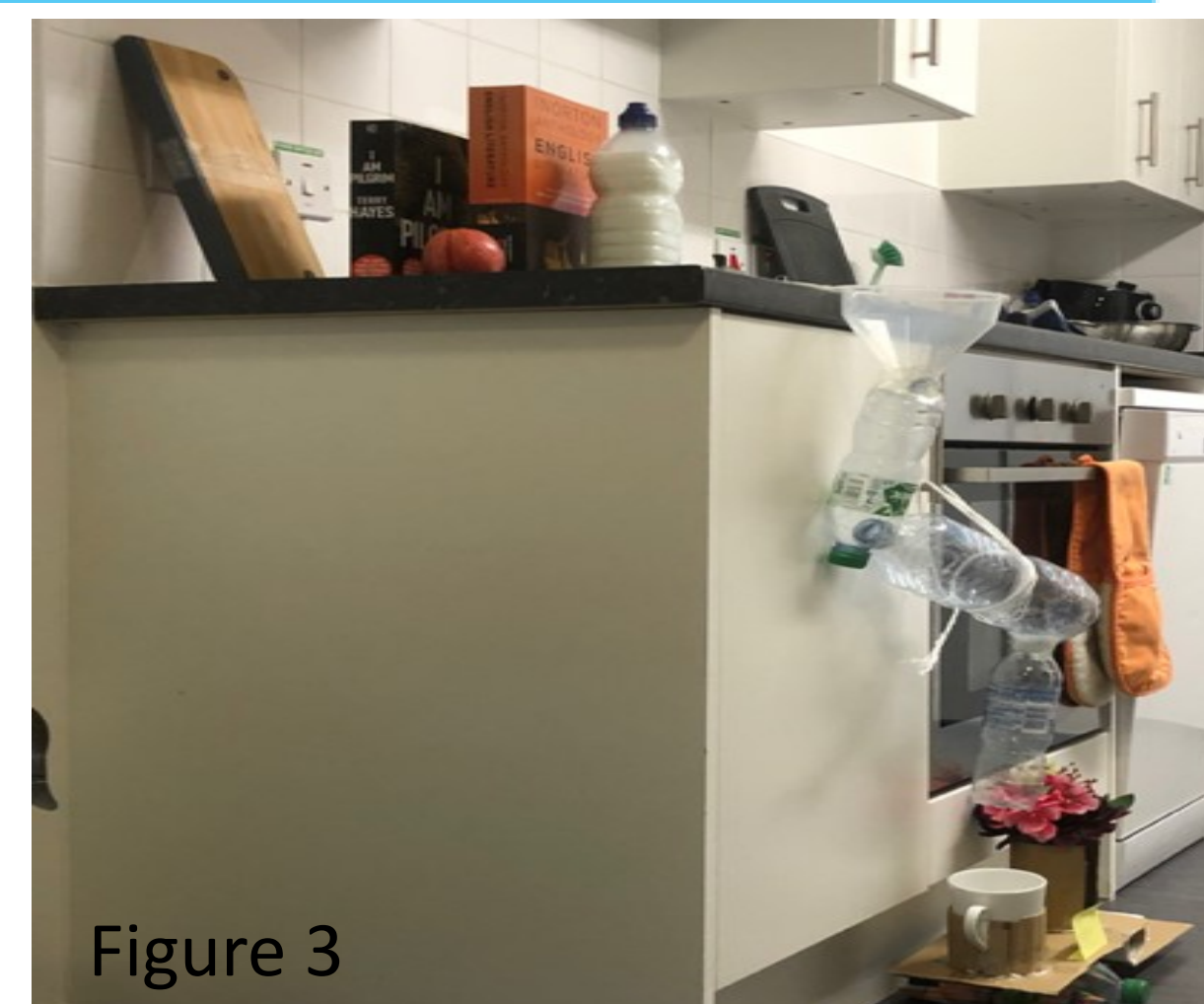


Figure 3

Student Experience and Community Building: Key Take Home Messages

Topics:

These were delivered with short pre-recorded lectures complemented by self-study problems and tutorials.

Their content was of relevance to any Engineering student (Chemical, Civil, Electrical or Mechanical), thus giving us a feel of connection and wider purpose with the whole class!

Project Experience:

In the projects we used our creativity and enthusiasm while tackling real life engineering problems. In all projects we worked in teams, giving us the opportunity to collaborate and network with budding engineers from all disciplines!

The projects made us realize the power of working with others, and how teamwork can create something much bigger and better than the sum of individual works!

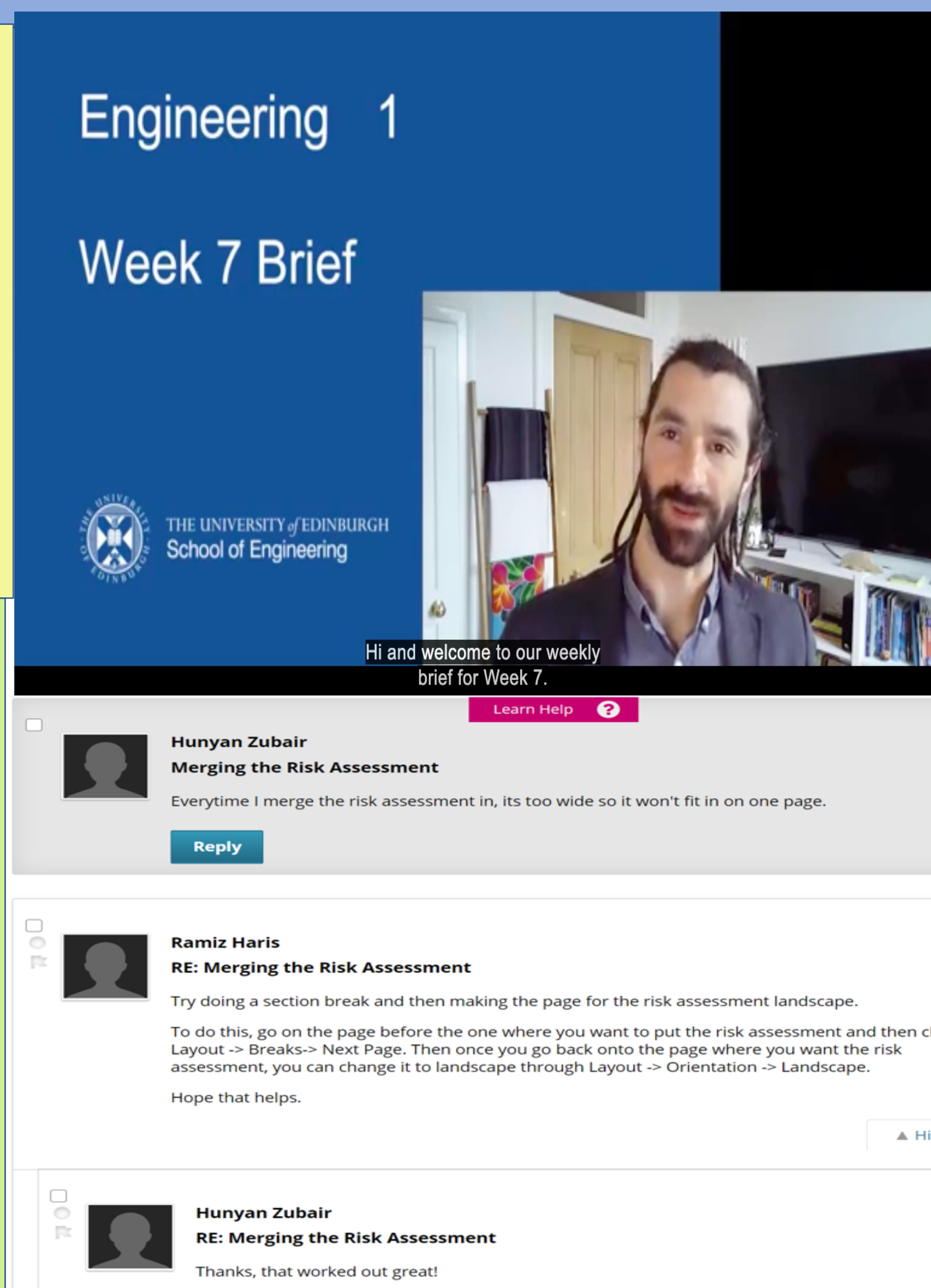


Weekly Briefings:

These were weekly 5-minute videos to give us an idea of what we should be working on through the week. Among general course updates, Simone kept reminding us of the tools available for building a community of "Engineers in the Making", e.g., student societies, study groups, meeting rooms, discussion boards etc. They gave an excellent sense of direction and served as the first step to build our own community.

Discussion Board:

Here we could write our questions on anything about the course, from housekeeping to technical matters. They were a truly welcoming and safe environment for us to raise and answer questions in a judgment free zone. Our peers were incredible at answering excellently and rapidly any question posted. This really helped establish trust among all of us for the creation of a strong community of 1st year Engineering students.



Overall Experience:

Engineering 1 was vital in allowing our student community to feel like true engineers, as well as helping develop the confidence needed for our future studies.

Projects such as the Rube Goldberg were a real example of experiential learning, we had fun creating and building gadgets with our own hands, express our creativity, designs and ideas, while testing our hard-core skills such as mathematical derivations and calculations.

