12th October

form teams, discuss study topics

19th/21th October

presentations of ideas (5 slides) & feedback

16th/18th November

building complete (software, procedure), run studies

30 November/1st December

presentations of results (graph) & feedback

you goal is to design and run a controlled experiment with human participants which tests the role of physicality in an interactive setting

your control group will experience a virtual setting (assuming you hypothesise that physicality is more valuable, not less)

you can exactly replicate an existing study to verify its results, or you can design an innovative study based on an existing one

Meet in your groups to create an experimental design
Your submission should total 5 slides:

a. hypothesis (1 slide)
What is your hypothesis? Is it precise enough that it can be tested?
If your hypothesis is vague/non-incremental it will be hard to verify

b. independent Variable(s) (1 slide)
What are you testing, and what are you comparing it against? Is this the most stringent/appropriate comparison you could run? The more IVs you have the more complex to control your procedure is likely to be

c. dependent Variable(s) (1 slide)
How are you measuring your test? What form(s) of data are you collecting? Can you directly sample data or do you need to calculate it from multiple samples (e.g. pre- and post- tests). Do not gather data which does not address your hypothesis, random searches for patterns which are not covered by your hypothesis confound your data.

d. procedure/experimental design (2 slides)
Are you measuring between- or within-subjects? Do you need to worry about counterbalancing? Is your procedure *valid* (i.e. could someone else replicate your results consistently)? Is your procedure *reliable* (i.e. do the data sufficiently address your hypothesis)? Is your procedure ethical? What kind of an environment do you need to build/configure in order to ensure your procedure can be followed? What kind of statistical tests will suit analysis of your data (this last question does not have to be answered at this stage, it can wait till stage 2).

Complicated procedures tend to require more participants and may be less likely to find statistically significant results. In general, control is better than measurement for unimportant factors.

Submit your slides (pdf or ppt) by Monday 19/10/2015 9am at csxar@bristol.ac.uk

Slides available at https://goo.gl/B1SZTe