1 Timetable

DT	Specialist subject	Workshop 1	Workshop 2
Timo	M&R	[1] Mon 3pm Fulton 204	[2] Tuesdays 3-4 pm Arts A04
Rachel	M&R	[3] Wed 10 am Fulton 201	[4] Thurs 1pm Pev1 2A
Rob	MM1	[1] Mon 3pm Fulton 204	[4] Thurs 1pm Pev1 2A
Jussi	MM1	[2] Tuesdays 3pm Arts A04	[3] Wednesdays 10-11 am Fulton 201
Nicolo	M&R	[1x] Mondays 3-4 pm ONLINE	[4x] Thursdays 1-2 pm ONLINE
Zoe	MM1	[1x] Mondays 3-4 pm ONLINE	[4x] Thursdays 1-2 pm ONLINE

2 Face-to-face workshops

2.1 Preparation

1. Ensure you have looked through the solutions for the workshop. Print a copy for yourself, but keep safe.
2. The MM1 problems and solutions are on: the canvas page for MM1 under `Assignments/Weekly Problem Sets`.
3. The M&R problems and solutions are on Lily's github.
4. If you notice any errors or if anything is unclear, let Lily or Alex know asap!

2.2 Arrival and setup

1. Arrive at the allocated teaching space on the hour.
2. Login to the computer and have the workshop questions for both MM1 and M&R ready to share on the projector.
3. Login to Poll Everywhere username `ilovephysics` and the password given to you by Lily, navigate to the folder `2021/Workshops/`, and activate the poll "Workshop N questions".
4. Normally teaching sessions run from :00 to :50, but considering the current health and safety stuff for the pandemic, I would aim to start at 5 minutes past the hour and finish at 10 minutes to the hour.

2.3 Introduction

1. Explain that the workshop should be roughly 20 mins each on MM1 and M&R.
2. Ask the students to indicate any questions they are struggling with on the poll everywhere. They will almost certainly pick those that they are asked to submit the answers for for grading.
3. Tell the students that they should discuss and work together if they want to, and it is also fine to work alone if they wish.
4. Tell them that if they would like any answers checked or want anything clarified, to put their hand up.
5. Walk around the room to see if anyone needs a paper copy of the questions or has any questions.

2.4 Helping students

1. If they show you an answer and it is numerically correct, let them know that it is. This is also fine to do for the highlighted questions for submission.
2. If they show you an answer and it is incorrect, read the question aloud with them and then go through their working step by step.
3. Remember that there is usually more than one way of solving a problem. Their method may not be wrong, but to save you having to determine this on the fly, a good technique is to say 'right, this may well be a good method for solving this problem, but may I share with you the method I prefer?' - this way you can stick to the worked solutions we have provided you with.

4. If a student say they really don't understand, or really are struggling to make a start, check with them if they have attempted the adaptive practice assignments on canvas. Those assignments link the students to the sections of the eTextbook they should read. They may have had trouble getting on to canvas or setting up wiley - often I meet students who have almost no technical skills - if this is the case please get their email and email them and me so we can set up a time to get them going online.

2.5 Finishing up

Explain to the students that they should take a photo of their attempt at the highlighted questions and upload to the correct canvas page by the end of this week.

3 Zoom workshops

Lily, Zoe, and Nicolo met on 30 Sept 2021 and concluded: The best way to manage the **first week** of zoom workshops is to:

1. Keep it simple! No polls or breakout rooms.
2. Keep it flexible! We will learn from the first week what does or does not work, and adjust accordingly.

Other than these two points, you should follow the instructions for in-person workshops.

4 Marking

Students will upload a photo of their answers to the workshop problems for MM1 and M&R by Friday at noon (so the first for 2021 will be Friday 8th October).

The uploads will then be accessible via speedgrader from the respective canvas sites, filtered by student group (Axions etc).

The marking is out of 3:

0 : Nothing uploaded

1 : Something uploaded, but nothing that makes sense. If they have uploaded a blank page for example, or if they have written the question but not attempted an answer. Or, if they uploaded just the answer, with no working.

2 : An attempt has been made to solve the question, but it is not complete. For example (for the first M&R question), they might have done the integral right but not solved the quadratic, or vice versa.

3 . The correct answer is given.

The groups you should mark are given in Table 1

DT	Groups
Timo	Gravitons (Kathy Romer)& Gluons (Iacopo Vivarelli)
Rob	Muons (Sebastian Jaeger)& Photons (Jose Verdu)
Nicolo	Electrons (Jose Verdu)& Neutrinos (Jeff Hartnell)
Zoe	Positrons (Alessia Pasquali)& Tachyons (Alex Cerri)
Jussi	Quarks (Andrea Banfii)& Pions (Conor Boland)
Rachel	Excitons (Barry Garraway)& Axions (Simon Peeters)

Table 1: Group allocations 2021