

# General information for LEGO Football CWM 2023

Dear students,

Welcome to the LEGO football Course Work Module! This document provides a concise summary of key information for the course.

**Location:** Control Laboratory, 5<sup>th</sup> Floor, Thom Building

**Schedule:** the lab will run as follows, see below for a full timetable:

- Monday: 9am – 1pm, and 2pm – 5pm
- Tuesday: 9am – 1pm, and 2pm – 5pm
- Wednesday: 9am – 1pm
- Thursday: 9am – 1pm, and 2pm – 5pm
- Friday: 9am – 1pm

**Attendance:** will be recorded for “engagement” marks. Please contact me ([jack.umenberger@eng.ox.ac.uk](mailto:jack.umenberger@eng.ox.ac.uk)) if you anticipate missing a session.

**What to bring:** all equipment will be provided. You may wish to bring a tablet/laptop if you have one, as an additional screen on which to display the lab notes.

**Lab notes:** can be found on Canvas.

**Software:** will be installed and available on the computers in the Control Lab.

**Assessment:** x/4 marks will be awarded for attendance (“engagement”). y/5 marks will be awarded according to the assessment protocol found in Section 9.4 of the Engineering Science Course Handbook. A copy of this protocol is included below for your reference.

**Pre-lab preparation:** is not required.

Looking forward to a fun and productive CWM!

All the best,

Jack Umenberger ([jack.umenberger@eng.ox.ac.uk](mailto:jack.umenberger@eng.ox.ac.uk)) and Junaid Memon ([junaid.memon@eng.ox.ac.uk](mailto:junaid.memon@eng.ox.ac.uk))

## Lab timetable

	Monday	Tuesday	Wednesday	Thursday	Friday	
09:00 - 09:30	Lecture	Lecture	Lecture	Lecture	Summary	09:00 - 09:15
09:30 - 13:00	Modeling (Q1 - Q8)	Control design (Q9 - Q18)	Control deployment (Q19 - Q22)	Control testing (Q23 - Q24)	Football Prepare presentations Assessment	09:15 - 10:00 10:00 - 11:30 11:30 - 13:00
13:00 - 14:00	Lunch	Lunch		Lunch		
14:00 - 14:30	Lecture	Lecture		Lecture		
14:30 - 17:00	Modeling (Q1 - Q8)	Control design (Q9 - Q18)		Pole placement (Q25 - Q28)		

## Assessment criteria

<b>5 Marks</b>	This is broadly equivalent to a distinction/1 <sup>st</sup> . These are for students who are well prepared for the lab and show intelligent understanding when interrogated about their work.
<b>4 Marks</b>	The mark that the majority of students will obtain for work that is essentially correct and complete.
<b>3 Marks</b>	The mark for work that is either incomplete or incorrect or required a lot of help.
<b>2 Marks</b>	The mark for work that is both incomplete and incorrect.
<b>1 Mark</b>	Did little more than attend the lab and make some attempt at recording activities.
<b>0 Marks</b>	Non-attendance