

Sergio Lozano-Peerez
– Practical Class Organiser (PCO)

Full briefing of the
Practical Class

- most of this information is also available in your
Departmental Handbook

Key facts

- practicals are **COMPULSORY**
- they constitute “**examinable coursework**”

failure to attend, arrive on time, leave without notifying, complete and get marked your assessed practicals and lab notebook this year will lead to FAILURE in Prelims, with no ability to re-sit

...of course, mitigating circumstances will be taken into account by the Proctors

Procedures, rules and regulations

- because of the serious implications of failing to complete a practical we have put in place a series of procedures designed to catch problems early, such that they can be dealt with before they become critical
- other rules and regulations are in place to ensure your safety and to ensure the Department complies with Health and Safety requirements
- you **MUST** follow all procedures and obey all rules and regulations
 - they are there for **YOUR** benefit
- failure to do so will get you thrown out of the labs

When and where

- **Thursday and Friday afternoons 2-5pm**
- **undergraduate Teaching Labs (Holder Building)**
- **expect one practical every other week**
 - *half of you in odd weeks*
 - *half of you in even weeks*
 - *though the first two weeks of this term are different!*
 - *all do an introductory practical in 1st wk and another in 2nd wk*
 - *only two practicals in Trinity Term because of Prelims*
 - *arranged differently*
- **you'll be working in groups of three**
 - **each group will have its own set of equipment**

When and where

- **Michaelmas Term & Hilary Term groups work in parallel**
 - *Eight sets of equipment*
 - *Two week cycle*

- **Trinity Term practicals are organised differently**
 - *use more specialised equipment*
 - *we don't have eight sets of equipment*
 - *teams in series throughout weeks 1-4*

Timetables – Michaelmas Term

Introduction to Computing

	Tue Week 1	Wed Week 1	Thu Week 1	Fri Week 1
1	Haydon, Imogen	Anyanechi, Chidiebube	Ji, Dingqiao	Coulson, Matthew
2	Joinson, Nicholas	Kiatkulvanich, Nadhanont	Wang, Yiran	Hua, Leila
3	Indradjaja, Russell	Lawrence, Magnus	Ginnis, Jack	Roskilly, Rosanna
4	Cole, Hannah	Revia, Griselda	Lin, Hao	Walemba, Nathan
5	Loncarevic Whitaker, Julian	Zhang, Wentao	Simmonds, Martha	Zdolyny, Elysia
6	Bulla, Andrew	Davison, Eleanor	Strangward-Pryce, Gregory	McClement, Zaria
7	Moss, Archie	Tortell Milhano, Amelia	Bali, Anjuli	Xu, Yixin
8	Chen, Yifan	Wheatley, Annabella	Lawton, Owen	Choi, Subin
9	Tsun, Jonathan	Hartog, Timothy	Leyland, Freya	Tearle, Ouida
10	Kim, Kyungsung	Xiong, Yuelin	Meganathan, SuJayshen	Wagstaff, Thomas
11	Xu, Zhiyun	Liu, Yuqi	Tang, Zhongyu	Clement, Oliver
12	Loncarevic Whitaker, Julian	Tariq, Wajahat	Thornley, Benjamin	Davies, Carys

Timetables – Michaelmas Term

Thursday Week 2 & Thurs & Fri Weeks 3, 5, and 7			
A1	Hartog, Timothy SEH	Meganathan, Sujay SEH	Tang, Zhongyu SEH
A2	Thornley, Ben SEH	Tsun, Jonathan SEH	Xiong, Yuelin SEH
A3	Chen, Yifan SEH	Anyanechi, Ebube QNS	Cole, Hannah QNS
A4	Kiatkulvanich, Oh QNS	Lawrence, Magnus QNS	Loncarevic Whitaker, Julian QNS
A5	Revia, Griselda QNS	Zhang, Wentao QNS	Ginnis, Jack CCC
A6	Haydon, Imogen CCC	Ji, Dingqiao CCC	Lin, Hao CCC
A7	Loncarevic-Whitaker, Murray CCC	Simmonds, Martha CCC	Strangward-Pryce, Greg CCC
A8	Wang, Yiran CCC	Choi, Charlotte STA	Davison, Eleanor STA

Thursday only week 2

Thursday & Friday
weeks 3, 5 & 7

Friday Week 2 & Thurs & Fri Weeks 4, 6, and 8			
B1	McClement, Zaria STA	Tearle, Ouida STA	Tortell Milhano, Amelia STA
B2	Wheatley, Annabella STA	Xu, Clem STA	Bali, Anjuli STC
B3	Bulla, Andrew STC	Lawton, Owen STC	Leyland, Freya STC
B4	Moss, Archie STC	Wagstaff, Thomas STC	Zdolynny, Elysia MAN
B5	Coulson, Matthew MAN	Hua, Leila MAN	Indradjaja, Russell MAN
B6	Joinson, Nicholas MAN	Roskilly, Rosanna MAN	Walemba, Nathan MAN
B7	Clement, Oliver TRI	Davies, Carys TRI	Kim, Kyung TRI
B8	Liu, Yuqi TRI	Tariq, Wajahat TRI	Xu, Zhiyun TRI

Friday only week 2

Thursday & Friday
weeks 4, 6, & 8

This term's practicals

MT Wk	YEAR 1 (Thur, Fri) [except Week1, when it is Tues-Fri]
1	1P1a, Intro to Computing (PJW , Rob Saunders)
2	1P1b, Intro to Optical Microscopy (KAQOR , SLP) TA: Stephen Turrell (Y2)
3	1P2, Intro to MATLAB and LabView (AARW , Sebastian Bonilla)
4	TA: Suer Zhou (Y3) and Przemyslaw Klups (Y2)
5	1P3, Young's Modulus & Stress Analysis (JaMS , PDN)
6	TA: Abdalrhaman Mohamed (Y2)
7	1P4, Metallography (Phani Karamched , tbc)
8	TA: Stephen Turrell (Y2)

1P3 is a formative assessment practical

This term's practicals and associated lectures

- **Introduction to Computing**

 - *for data handling, analysis and presentation*

- **Introduction to Optical Microscopy**

 - *technique used in a large number of practicals*

- **Introduction to MatLab and LabView**

 - *software used for computer programming and data acquisition and analysis*

- **Young's Modulus**

 - *Elasticity and Structures (MT)*

- **Metallography**

 - *Practice your grinding and polishing and try your optical microscopy skills to understand phase diagrams and the effect of rolling and annealing*

<http://www.materials.ox.ac.uk/teaching/ug/ugpracticals.html>

Starting a practical

- **sign-in in the practical lab at the start of EVERY afternoon (and sign-out at the end of each afternoon)**
- **attend briefing from Senior Demonstrator (SD)**
 - *you are NOT allowed to start a practical before the briefing*
 - *covers the theory and practice of the experiment*
 - *safety issues*
 - *report requirements*
 - *arrangements for marking*
- **get your practical book time and date stamped (beginning and end of practical)**
 - *health and safety requirement & compulsory*
 - *failure to do so equals starting a practical without permission*

Assistance

- **SD will usually be present most of the first afternoon and will inspect your lab notebook and provide advice (varies somewhat depending on the requirements of the practical)**
- **Teaching Assistant (TA) and Practical Class Technician (PCT) present throughout**

Your practical notebook

- Practical notebooks will be used whenever (and only while) you are in the lab to record:
 - Intro and objectives of practical
 - Data
 - Observations
 - Results of any analysis
- following good practice in research and industrial labs, all entries should be legible, written in pen and if you make a mistake, just draw a line through it
- More during the “Lab notebook lecture” and in:

<http://colinpurrington.com/tips/lab-notebooks>

Your practical notebook

- **Lab notebooks cannot leave the Teaching Labs**
- **Lab notebooks are the property of the Department**
- **Lab notebooks are made available to Examiners**

How your practicals will be assessed

- All practicals except 1P1a, 1P1b and 1P2 will have the lab notebooks assessed. You will do all your work while in the lab.
- Selected practicals will require writing a report, which will be assessed (counting towards prelims). The report will be prepared as if it was a manuscript submitted to Acta Materialia. You will have 3 weeks to write a report.
- The first assessed report will be formative, in order to provide feedback (1P3 Young's Modulus, wks3-4)

Which practicals will be assessed and how?

Experiment No Current	Experiment Name	Current Term	Current Weeks	Report assessed?	Lab book assessed?	Senior Demonstrator
1P1a	Intro to Computing	MT19	wk 1	No	No	Dr Paul Warren
1P1b	Intro to Optical Microscopy	MT19	wk 2	No	No	Prof Keyna O'Reilly
1P2	Intro to MATLAB & LabVIEW	MT19	wks 3,4	No	No	Prof Andrew Watt & Sebastian Bonilla
1P3	Young's Modulus & Stress Analysis	MT19	wks 5,6	Yes, formative	Yes	Prof Jason Smith & Prof Pete Nellist
1P4	Metallography	MT19	wks 7,8	No	Yes	Dr Phani Karamched
1P5	Polymers - Molecular Weight Effects	HT20	wks 1,2	No	Yes	Prof Andrew Watt
1P6	Thermal Analysis	HT20	wks 3,4	Yes	Yes	Prof Enzo Liotti
1P7	Bubble Raft	HT20	wks 5,6	No	Yes	Prof Simon Benjamin
1P8	Electrode Potentials	HT20	wks 7,8	Yes	Yes	tbc
1P9	Energy Levels and Band Gaps	TT20	wks 1,2	No	Yes	Prof Peter Wilshaw
1P10	Fabrication & Tensile Testing	TT20	wks 1-3	No	Yes	Dr Wen Cui

MT

HT

TT

How will they contribute to Prelims?

- 8 practicals will have the lab books assessed, contributing with 3 marks each (Total of 24 marks)
- 2 practicals will have their reports assessed, contributing with 13 marks each (Total of 26 marks)
- Total contribution to prelims: 50 marks

Assessed reports

- Reports will be in the form of a full write-up with a journal paper structure (E.g. Acta Materialia). They will have a limit of 3000 words (also limit number of figures to 10)
- Report will be submitted electronically
- There may be teething problems – in which case please report to Philippa (Academic Administrator) or myself
- ***a report should be written by each individual student*** and NOT co-operatively by the practical group
 - see Handbook for relevant section on **Plagiarism**
- follow the guidelines given in the “report writing” lecture

Submission of reports

- reports submissions are to be made in the form of a **pdf document** to Canvas by 1pm on the Friday three weeks after the starting date
 - otherwise it will be deemed to be late and will incur penalties

- your pdf filename should be in the format:

“Practical number – your first name and family name”

e.g. 1P2 – Sergio Lozano-Perez

Submission of reports

- **Submission must include an electronic declaration of authorship**

- **Electronic Declaration of Authorship for online practical reports**

- **Declaration of authorship - I confirm the following:**

- **I have read and understood the University's disciplinary regulations concerning conduct in examinations and, in particular, the regulations on plagiarism (The University Student Handbook Section 8.7; available at <https://www.ox.ac.uk/students/academic/student-handbook>).**

- **I have read and understood the Education Committee's information and guidance on academic good practice and plagiarism at www.ox.ac.uk/students/academic/goodpractice/**

- **The [thesis/dissertation/extended essay/assignment/project/other submitted work] I am submitting is entirely my own work except where otherwise indicated.**

- **It has not been submitted, either partially or in full, either for this Honour School or qualification or for another Honour School or qualification of this University (except where the Special Regulations for the subject permit this), or for a qualification at any other institution.**

- **I have clearly indicated the presence of all material I have quoted from other sources, including any diagrams, charts, tables or graphs.**

- **I have clearly indicated the presence of all paraphrased material with appropriate references.**

- **I have acknowledged appropriately any assistance I have received in addition to that provided by my [tutor/supervisor/adviser].**

- **I have not copied from the work of any other candidate.**

- **I have not used the services of any agency providing specimen, model or ghostwritten work in the preparation of this thesis/dissertation/extended essay/assignment/project/other submitted work. (See also section 2.4 of Statute XI on University Discipline under which members of the University are prohibited from providing material of this nature for candidates in examinations at this University or elsewhere: <http://www.admin.ox.ac.uk/statutes/352-051a.shtml>).**

- **I agree to retain an electronic copy of this work until the publication of my final examination result, except where submission in hand-written format is permitted.**

- **I agree to make any such electronic copy available to the examiners should it be necessary to confirm my word count or to check for plagiarism**

- **(You must respond to submit your assignment.)**

Lab notebooks arrangements

- **Lab notebooks belong to the department and cannot leave the teaching labs**
- **You will have to ensure all data and relevant analysis from each practical is in the lab notebook before you hand it in**
- **For those practicals where you need to write a report, you'll have to photocopy the relevant lab notebook pages before you finish the practical (the notebook stays in the lab!)**

End of term arrangements

- **Assessed/formative reports should be submitted before the deadline**
- **Marks will be sent to your College tutors towards the end of term**
 - **feel free to ask them for these marks and for their comments and feedback**

Safety in the Teaching Labs

- everyone's safety is our highest priority
- every effort has been made to make the labs safe
- however, there is also an obligation on YOU to help
- some **DOs** and **DON'Ts** follow, taken from the Handbook

The DOs

- DO** pay attention to the PCT and demonstrators
 - DO** read and follow safety instructions
 - DO** familiarise yourself with fire escape routes
 - DO** keep fire doors closed and escape routes clear
 - DO** wear appropriate eye and hand protection
 - DO** wash hands after working with chemicals
 - DO** work in a fume cupboard with etchants and solvents
 - DO** use minimum quantities of flammable liquids
 - DO** keep the labs clean
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- DO** speak in English at all times in the labs
 - DO** keep long hair tied back at all times

...and the **DON'Ts**

DON'T eat, drink or put on make-up in the labs

DON'T use your mobile phone

DON'T mouth-pipette or lick things

- this includes sucking your pen!

● and a couple of “obvious” ones, not in the Handbook:

DON'T mess around

- if you do, you'll be thrown out

DON'T wear inappropriate clothing and shoes

- e.g. sandals, short skirts, long scarves

- you'll be asked to modify your dress or leave

Absence during practicals

- **you are required to sign-in to the labs any afternoon you are working there**
 - *it is your responsibility to do so*
- **a failure to sign-in constitutes an absence**
- **you are required to be present in the labs on both afternoons, unless you have finished your practical**
- **if you miss a practical you must inform the PCT of the reason as soon as possible**

Missing a practical / failing to submit a report

- you must inform the AA (Philippa) or her assistants (Joss and Jackie) if you miss a practical
- you must provide appropriate written evidence of a valid reason for missing a practical or failing to submit a report
 - *or if submitting late, in order to prevent penalties*
- appropriate evidence includes
 - *a medical certificate to cover illness*
 - *details need not be specified by the doctor*
 - *a signed letter from your College Tutor to cover other matters*
- normally no later than one week later
- one copy to the AA and a second to the PCT
- your College will also require a copy to submit to the Proctors

Penalties

Penalties are imposed by recommending that the Moderators in Prelims deduct marks from those awarded by the SD. Cheating is a Proctorial Offence (Proctors have the power to reduce the class of your degree). You will incur penalties by:

- *copying of another student's work will be reported to the Proctors*
- *starting a practical without permission*
- *late submission of report in the absence of legitimate mitigating*
- *failure to hand in the lab notebook at the end of each practical*

Penalties are currently under revision by the academic committee and you'll be soon informed of the changes

Feedback from the Practical Labs

- Lab notebooks will be available at the beginning of each practicals with the mark of the previous practical and its feedback in a marking sheet
- SDs might annotate your reports electronically with comments and returned them to you together with a marking sheet with feedback
- At the end of each term, your marks (including those for Crystallography) will be passed onto your Tutors. Your Tutors should discuss these with you at your end of Term meetings. If they don't, please prompt them to do so

Submission to the Prelims Moderators

- **completion of introductory sessions (MT & HT) and all full practicals is a requirement of Prelims**
 - *all marks contribute to Prelims*
- **Your lab notebook will be submitted to the Chairman of the Moderators in the Preliminary Examination in Materials Science**
- **see Handbook to read more about the Examination Regulations on satisfactory completion of Practicals and other coursework**

...and on a positive note

- **The Armourers and Braziers' Company /
TATA Steel Prize
of £500
for the best performance in
first year practicals**

and finally...

- **if in doubt about anything
- just ASK**