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

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

### Thursday Week 2 & Thurs & Fri Weeks 3, 5, and 7

<table>
<thead>
<tr>
<th>A1</th>
<th>Hartog, Timothy SEH</th>
<th>Meganathan, Sujay SEH</th>
<th>Tang, Zhongyu SEH</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2</td>
<td>Thornley, Ben SEH</td>
<td>Tsun, Jonathan SEH</td>
<td>Xiong, Yuelin SEH</td>
</tr>
<tr>
<td>A3</td>
<td>Chen, Yifan SEH</td>
<td>Anyanechi, Ebube QNS</td>
<td>Cole, Hannah QNS</td>
</tr>
<tr>
<td>A4</td>
<td>Kiatkulvanich, Oh QNS</td>
<td>Lawrence, Magnus QNS</td>
<td>Loncarevic Whitaker, Julian QNS</td>
</tr>
<tr>
<td>A5</td>
<td>Revia, Griselda QNS</td>
<td>Zhang, Wentao QNS</td>
<td>Ginnis, Jack CCC</td>
</tr>
<tr>
<td>A6</td>
<td>Haydon, Imogen CCC</td>
<td>Ji, Dingqiao CCC</td>
<td>Lin, Hao CCC</td>
</tr>
<tr>
<td>A7</td>
<td>Loncarevic-Whitaker, Murray CCC</td>
<td>Simmonds, Martha CCC</td>
<td>Strangward-Pryce, Greg CCC</td>
</tr>
<tr>
<td>A8</td>
<td>Wang, Yiran CCC</td>
<td>Choi, Charlotte STA</td>
<td>Davison, Eleanor STA</td>
</tr>
</tbody>
</table>

### Friday Week 2 & Thurs & Fri Weeks 4, 6, & 8

<table>
<thead>
<tr>
<th>B1</th>
<th>McClement, Zaria STA</th>
<th>Tearle, Ouida STA</th>
<th>Tortell Milhano, Amelia STA</th>
</tr>
</thead>
<tbody>
<tr>
<td>B2</td>
<td>Wheatley, Annabella STA</td>
<td>Xu, Clem STA</td>
<td>Bali, Anjuli STC</td>
</tr>
<tr>
<td>B3</td>
<td>Bulla, Andrew STC</td>
<td>Lawton, Owen STC</td>
<td>Leyland, Freya STC</td>
</tr>
<tr>
<td>B4</td>
<td>Moss, Archie STC</td>
<td>Wagstaff, Thomas STC</td>
<td>Zdolyny, Elysia MAN</td>
</tr>
<tr>
<td>B5</td>
<td>Coulson, Matthew MAN</td>
<td>Hua, Leila MAN</td>
<td>Indradjaja, Russell MAN</td>
</tr>
<tr>
<td>B6</td>
<td>Joinson, Nicholas MAN</td>
<td>Roskilly, Rosanna MAN</td>
<td>Walembe, Nathan MAN</td>
</tr>
<tr>
<td>B7</td>
<td>Clement, Oliver TRI</td>
<td>Davies, Carys TRI</td>
<td>Kim, Kyung TRI</td>
</tr>
<tr>
<td>B8</td>
<td>Liu, Yuqi TRI</td>
<td>Tariq, Wajahat TRI</td>
<td>Xu, Zhiyun TRI</td>
</tr>
</tbody>
</table>
This term’s practicals

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

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](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
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?

<table>
<thead>
<tr>
<th>Experiment No</th>
<th>Current Term</th>
<th>Current Weeks</th>
<th>Report assessed?</th>
<th>Lab book assessed?</th>
<th>Senior Demonstrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1P1a</td>
<td>MT19</td>
<td>wk 1</td>
<td>No</td>
<td>No</td>
<td>Dr Paul Warren</td>
</tr>
<tr>
<td>1P1b</td>
<td>MT19</td>
<td>wk 2</td>
<td>No</td>
<td>No</td>
<td>Prof Keyna O’Reilly</td>
</tr>
<tr>
<td>1P2</td>
<td>MT19</td>
<td>wks 3,4</td>
<td>No</td>
<td>No</td>
<td>Prof Andrew Watt &amp; Sebastian Bonilla</td>
</tr>
<tr>
<td>1P3</td>
<td>MT19</td>
<td>wks 5,6</td>
<td>Yes, formative</td>
<td>Yes</td>
<td>Prof Jason Smith &amp; Prof Pete Nellist</td>
</tr>
<tr>
<td>1P4</td>
<td>MT19</td>
<td>wks 7,8</td>
<td>No</td>
<td>Yes</td>
<td>Dr Phani Karamched</td>
</tr>
<tr>
<td>1P5</td>
<td>HT20</td>
<td>wks 1,2</td>
<td>No</td>
<td>Yes</td>
<td>Prof Andrew Watt</td>
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<tr>
<td>1P6</td>
<td>HT20</td>
<td>wks 3,4</td>
<td>Yes</td>
<td>Yes</td>
<td>Prof Enzo Liotti</td>
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<tr>
<td>1P7</td>
<td>HT20</td>
<td>wks 5,6</td>
<td>No</td>
<td>Yes</td>
<td>Prof Simon Benjamin</td>
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<tr>
<td>1P8</td>
<td>HT20</td>
<td>wks 7,8</td>
<td>Yes</td>
<td>Yes</td>
<td>tbc</td>
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<tr>
<td>1P9</td>
<td>TT20</td>
<td>wks 1,2</td>
<td>No</td>
<td>Yes</td>
<td>Prof Peter Wilshaw</td>
</tr>
<tr>
<td>1P10</td>
<td>TT20</td>
<td>wks 1-3</td>
<td>No</td>
<td>Yes</td>
<td>Dr Wen Cui</td>
</tr>
</tbody>
</table>
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

**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