Year in Europe:
Year 2 Third (Final) Briefing

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Your typical setting at Imperial

- Introductory talk
- Assignment of academic tutorials – Timetables
- UG office
- Personal Tutor
- Senior Tutor

Your typical setting abroad

- One main contact - the local Erasmus co-ordinator
- Contact him/her before your arrival and arrange a meeting
- Also have an Academic Visitor
- Two visits in the year
- E-mail contact throughout the year
Expectations from Imperial

Lecture courses (24 ECTS)
• Required to follow 24 unweighted ("raw") ECTS
• Required to sit exams: 24 weighted ECTS (minimum)
• We will count the best 18 weighted ECTS
  • weighting factor = 1.5 if course taught in local language
  • weighting factor = 1.0 if course taught in English
• All year 3 lecture courses count 10% towards your degree
• Language courses & humanities can count towards the 24 raw ECTS, but not towards the exam requirements (ie, you can’t count any language/humanities towards your physics degree)

Research Project (36 ECTS)
• Average time effort required: 3 - 3.5 days per week
• The project counts 15% towards your degree
# Course weighting

The course unit weighting for the 242 ECTS of your four year programme is as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Courses</th>
<th>Weighting 1</th>
<th>Weighting 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>Lecture courses &amp; laboratory (62 ECTS)</td>
<td>8.3%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Year 2</td>
<td>Lecture courses &amp; laboratory (60 ECTS)</td>
<td>25.0%</td>
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</tr>
<tr>
<td>Year 3</td>
<td>Research project (36 ECTS) (*)</td>
<td>15.0%</td>
<td>25.0%</td>
</tr>
<tr>
<td></td>
<td>Lecture courses (24 ECTS)</td>
<td>10.0%</td>
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</tr>
<tr>
<td>Year 4</td>
<td>Lecture courses &amp; laboratory (42 ECTS)</td>
<td>29.2%</td>
<td>41.7%</td>
</tr>
<tr>
<td></td>
<td>Two Comprehensive Papers (18 ECTS)</td>
<td>12.5%</td>
<td></td>
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</tbody>
</table>

(*) The research project is weighted as follows:

- Written report (40-60 pages, marked at Imperial): **80%**
  (incl. 16% contribution of continuous assessment mark by your local supervisor)
- Oral presentation of your work (in host language): **20%**
  (assessed abroad)
Year 3 grades weighting

Lecture Courses (40%)
(results from best 18 weighted ECTS)

Written or oral exams
Assessment by project supervisor
Assessment by Imperial markers

Project (60%)

- Oral (12%)
- Cont. Assess. (9.6%)
- Report (38.4%)
- Marker A (19.2%)
- Marker B (19.2%)
Lectures

You need to choose lecture courses for the Learning Agreement

• Talk to Academic Visitors / past students
• Look at host university website
• Cover pre-requisites for Imperial level 4 courses?
• Specific requirements for each institution
• Course selections must be agreed by Academic Visitor
• You can’t be examined twice on the same material!

Make any changes (if you wish) when you arrive

• Discuss with co-ordinator and project supervisor
  • May need to add Course(s) in support of project
• Any later changes in lecture course list must be discussed with and approved by the Academic Visitor
• Lecture course form: Deadline early November
Lectures and exams

Format
• Lecture style different
• Classwork-like exercises (like tutorials)

Examinations
• May be written (open book?) or oral
• Resits may be offered
  • Not a right, usually a favour by the lecturer
  • Fully credited
  • Sometimes taken to improve a poor mark
Learning difficulties?

• If you need extra time allocation for exams:
  • Inform the Academic Visitor (who in most cases wouldn’t know whether or not you are affected)
  • Inform the Erasmus coordinator at the host university and ask for the procedure to follow
  • You need to inform the lecturers ahead of time
• Contact Mery Fajardo (m.fajardo@imperial.ac.uk) for further queries or speak to the Senior Tutor
Your Research Project

- Counts 15% of your overall degree (60% of your grade abroad)
- You spend on average 3-3.5 days/week on your project
- You organise the project yourself (we can give you names of past supervisors but you are free to approach anyone at the host institution pretty much as you would do at Imperial)
- You need to have organised a project by November - *start early!*
- The project work is assessed in 3 ways
  - A report (similar to MSci report, 40-60 pages) written in English
  - An oral presentation (15-25 min talk in local language)
  - Continuous assessment by the supervisor
- Reports are due early July - *start writing in May*
- You send us regular status updates (due Dec, Feb, April)
- We send you guidelines about Report structure, etc., in August
Your Research Project

• 36 ECTS
  - 3-3.5 days/week on average

• How do you arrange one?
  - Talk to Academic Visitor / past students before you go
  - Contact co-ordinator, discuss areas of interest
  - Contact possible supervisors; persist!
  - Visit labs, discuss possibilities
  - Make your constraints clear (3-3.5 days/week)
  - Agree choice with Visitor at Imperial (talk to Visitor!)
  - Start background reading by November if not before
  - Project Plan deadline early December
Project objectives

The overall objectives of the YiE (MSci) projects are to develop

• Research skills
  • Experience research environment
  • Take initiative (independence)
  • Innovation.

• Organisational skills
  • Time-management
  • Project planning
  • Adhere to deadlines

• Ability to work interactively
  • Team work
  • Effective communication
  • Professional relationships
Supervisor meetings

- Try to make the best of your time with your supervisor
- Some supervisors will be available to talk to most of the time, some will want to arrange regular meetings (e.g. once a week, once a fortnight – try not to let it get less regular than this).
- Don’t expect your supervisor to have worked out all the twists and turns in advance, remember science is most interesting when the direction changes as you follow it.
- It’s up to you to be innovative and suggest new ideas to your supervisor, just remember it’s also a good idea to listen to what they say and do what they suggest!
Research Logbook

• Keep a research Logbook! These are not assessed by us but essential for you to keep track of your work over an extended period of time

• Keep a record of:
  
  • what you read: papers, journals, ..... and what was useful, significant, ......, what you should read next
  
  • discussions with supervisor – take your logbook along and take notes. It is unlikely that you will remember all the things your supervisor says or suggests!
  
  • what you do: experiment, programing, computation, data analysis, ......... and your thoughts and conclusions about this
Report structure

- Language: Report to be written in English with a short summary or abstract in both English and the language of the host country.

- Length: Report should total 40-60 pages (see box below)

- Structure: Report must include:
  - **Title** (which clearly identifies what it is about)
  - **Abstract** (*in two languages*) (main features and the results achieved)
  - **List of Contents** (chapters, sections and page numbers identified)
  - **Preface** (identifying precisely what your part in the work has been)
  - **Introductory Section** (aims of the project, context)
  - **Discussion** of the methods
  - **Description** and presentation of results/observations
  - **Discussion** of the results (uncertainties, conclusions from the results)
  - **Conclusions** (extent of aims achieved; future work)
  - **Acknowledgments** (refer to people to thank)
  - **List of References**
Submission and deadline

- We use Blackboard to allow upload, via turnitin, of reports in PDF format – details will be sent out by email.
- Note the College late hand-in penalty rule: College policy is that any work submitted late will incur zero marks.
- If you have a valid excuse for submitting your work late such as illness or personal problems then it is very important that you speak to the Year in Europe Coordinator, the Academic Visitor or the Senior Tutor!
- Please remember, problems associated with computers are not accepted as valid excuses!
Plagiarism

College definition:
Unreferenced cutting and pasting of material from web pages, other people’s work, unreferenced quotations of text books and published papers will all be viewed as plagiarism.

• For further details, see Plagiarism under link General on the Undergraduate Laboratories web-site: www.imperial.ac.uk/physicsuglabs/general

• Plagiarism is treated very seriously. Penalties may include:
  • Loss of mark for given piece of work.
  • Loss of all marks and units for course.
  • Expulsion from degree course.
Literature and typesetting

• Literature search information and help
See under the library web pages and in particular the Physics librarian Ann Brew:
http://www.imperial.ac.uk/admin-services/library/subject-support/physics

Note that you don’t have to use LaTeX – but reports must be word-processed and submitted as pdf.
Report assessment

• Report Assessment will be carried out at Imperial by two academics independently. One of these will be from the MSci panel and most likely will have no direct experience of the project area, so make sure sufficient background information is included and you clearly define any “jargon” and acronyms! The report in overall has to be understandable to someone with good physics knowledge.

• Report Marking criteria:
  • Structure and language (out of 20)
  • Clarity (out of 20)
  • Techniques (out of 30)
  • Scientific achievements (out of 30)
References

References should be included in numerical order.

Example: Phys. Rev. D 91, 095008 – Published 7 May 2015
Exclusive production of heavy charged Higgs boson pairs in the
$pp \rightarrow ppH + H^-$ reaction at the LHC and a future circular collider

Introduction

There are several reasons why exclusive reactions are interesting [1,2]. One of them is the possibility to search for effects beyond the standard model (SM). The main advantage of exclusive reactions is that background contributions are strongly reduced compared to inclusive processes. A good example are searches for exclusive production of supersymmetric Higgs boson [3–5], anomalous boson couplings for $\gamma\gamma \rightarrow W + W^-$ [6–9] or for $\gamma\gamma \rightarrow \gamma\gamma$ [10,11]. So far these processes are usually studied in the so-called equivalent-photon approximation (EPA) (for a description of the method, see, e.g., [12]). (…)
Reference List

11. ..........

BEWARE when using review articles as sources – you should reference the article that you read not the references that the reviewer used!
Note that the axes are labelled (and have units), the figure key and axis labels are legible and the caption fully describes the content on the figure.

FIG. 11. Distributions in momentum transfer squared $t_1$ (left panel) and $t_2$ (right panel) at $\sqrt{s} = 14$ TeV in the Born approximation and for the amplitudes given by Eq. (2.15). The double spin-conserving contribution (cc) is show by the long-dashed line, the double spin-flipping contribution (ff) by the dotted line, and the mixed contributions (cf) and (fc) by the dashed and dot-dashed line, respectively. The solid line represents the sum of all the contributions and corresponds to the upper long-dashed line in Fig. 10.
Year 4 back at Imperial

• Take 24 ECTS of courses at MSci level = FHEQ 7

• Advantageous to have covered pre-requisites (ask lecturer)
  - You can offset up to 6 ECTS of MSci level courses taken abroad towards the above requirement (needs my approval)

• Additionally
  - One level-2 option course max
  - Usually 3rd yr lab (or 3 theory options if agreed)
  - You may change your Year 4 option choices

• Year 3 Core courses:
  - For you these are optional courses (not compulsory)
  - Physics of Universe (4.5 ECTS), Fluid Dynamics (1.5 ECTS)

• Attend the Options Talk & Soundbites (Thu 2nd May, LT1) and Options fair (May 7th, 12-2 pm, 3rd year lab)
Intensive Language Courses

- Do go abroad early enough to attend language classes offered at your host university - an excellent opportunity to meet people!

- Intensive language courses (compulsory) at Imperial Language Cntr.:

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<td>Time</td>
<td>11.00-14.00</td>
<td>11.00-14.00</td>
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Times to be Changed / Confirmed
Time line: Year 2

- Exam results available (mid July)
  - You are informed of decision of Board of Examiners
  - Registry notify LEAs that you will be spending your third year in Europe

- You arrive at host (Aug-Oct: dates vary)
  - During August we send you a starter-pack by email. This contains important information about course requirements, project writeup, etc.
  - Go early for freshers or language courses - dates vary by institution (some courses spread over several weeks)
  - E-mail us immediately on arrival
  - Meet local Erasmus co-ordinator
  - Find project and finalise your list of lecture courses
Physics Exchange contacts

Amy Cripps-Mahajan
Undergraduate Teaching Administrator
(UG admin office, Room 317, level 3)
ph.exchanges@imperial.ac.uk

Gavin Davies
Academic Coordinator for Physics Exchanges
Tutor for EPFL (Utrecht, for now)
(Blackett 508)
g.j.davies@imperial.ac.uk
Academic Visitors

Ingo Mueller-Wodarg
Grenoble – for 2018-19
(Huxley 6M56)
i.mueller-wodarg@imperial.ac.uk
New Visitor to be appointed

Marina Galand
Paris Orsay
(Huxley 718)
m.galand@imperial.ac.uk
Academic Visitors

Subu Mohanty
Valencia
(Blackett 1010)
s.mohanty@imperial.ac.uk

Florian Mintert
Heidelberg
(Elec. Engineering, 1200)
f.mintert@imperial.ac.uk

Arnaud Czaja
MIT
(Huxley 726)
a.czaja@imperial.ac.uk
Timetable for the coming months

• Hear from Senior Tutor by mid-July (60% hurdle)
• August: Welcome pack - **Important**
• Make sure we have your contact address (we will send you a form)
• August - October: start of academic term abroad
• E-mail contact details on arrival - **Important**
• Discuss lecture courses and project, agree with us
• First visit of academic visitor (Nov / Dec)
• Several forms: deadlines will be sent to you in the Welcome Pack
• You must adhere to all deadlines!
• Please be responsive to emails from us! You need to regularly check your Imperial College email!
What other students have said…

If you’re unsure about going on ERASMUS, don’t be, just go, you won’t regret it!!

I can undoubtedly say that deciding on spending a year abroad has been the best decision I have ever made.

I just can’t state strongly enough how much I recommend going on a year abroad. I had so many doubts about it, right up to the moment I boarded my plane at the start of September, but they all just fell away as soon as I arrived.

The experience of living abroad has made me more independent.

It was the best year of my life without doubt.
Application process

• Once you have been assigned an institution:
  • We send your name to the institution
  • They will contact you and coordinate with you the application process
  • In some cases we send you their detailed instructions directly (e.g., Lausanne)
  • You apply online - deadlines vary, can be anywhere from April until June
  • The institutions will contact you directly, but keep us in the loop
  • You fill in a Learning Agreement

• Consult the Year Abroad Handout (sent to you via email) for
  • Financial aspects
  • Learning Agreement
  • Language preparation
  • Timeline
  • More

Contact Adrian Hawksworth
(a.hawksworth@imperial.ac.uk)
for any questions regarding Finance
Money, money, money

- College fees: during your year abroad, you pay ~15% of your normal College UK/EU fees
- You do not pay tuition fees abroad
- You remain eligible to apply for your usual student support sources
- You are eligible to receive an EU Mobility Grant (on average ~€300 per month). For all countries except Switzerland, you apply through Imperial (internally, you will be prompted)
- For Switzerland (EPFL): you receive a mobility grant from the host university, this is administered directly by EPFL, they will ask you to fill in some forms, a separate application is not needed. This money is from the Swiss Government and amounts to CHF ~360 per month (max 10 months paid for the academic year abroad).
The Learning Agreement

LEARNING AGREEMENT FOR STUDIES

The Student

<table>
<thead>
<tr>
<th>Last name (s)</th>
<th>First name (s)</th>
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<tr>
<th>Date of birth</th>
<th>Sex [M/F]</th>
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<table>
<thead>
<tr>
<th>Study cycle^4</th>
<th>Subject area, Code^2</th>
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The Sending Institution

<table>
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<tr>
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<th>Address</th>
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<tr>
<th>Contact person^5 name</th>
<th>Contact person e-mail / phone</th>
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The Receiving Institution

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<th>Faculty</th>
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<th>Contact person name</th>
<th>Contact person e-mail / phone</th>
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Section to be completed BEFORE THE MOBILITY

I. PROPOSED MOBILITY PROGRAMME


Table A: Study programme abroad^6

<table>
<thead>
<tr>
<th>Component code (if any)</th>
<th>Component title (as indicated in the course catalogue at the receiving institution)</th>
<th>Semester (autumn / spring)</th>
<th>Number of ECTS credits to be awarded by the receiving institution upon successful completion</th>
</tr>
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<tr>
<th>Total: ..........</th>
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Web link to the course catalogue at the receiving institution:
[Web link(s) to be provided.]

Table B: Set of components to be replaced at sending institution

<table>
<thead>
<tr>
<th>Component code (if any)</th>
<th>Component title (as indicated in the course catalogue at the sending institution)</th>
<th>Semester (autumn / spring)</th>
<th>Number of ECTS credits</th>
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<th>Total: ..........</th>
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Provisions that will apply if some educational components would not be successfully completed:
[Please specify or provide a web link to the relevant information.]

Language competence of the student

The level of language competence^7 in [language of instruction] that the student already has or agrees to acquire by the start of the study period is:
A1 □ A2 □ B1 □ B2 □ C1 □ C2 □

[Other specific requirements that the sending or the receiving institution need to introduce can be added in this box.]
The Learning Agreement

Note: often this form is sent to you by the host institution & may vary from that displayed here

Lectures: 24-28 ECTS  
Project: 36 ECTS  
Total: 60-64 ECTS

Simply write „In place of Year 3 of the MSci at the home university“
The Learning Agreement

II. RESPONSIBLE PERSONS

**Responsible person in the sending institution:**
Name:  
Phone number:  
Function:  
E-mail:  

**Responsible person in the receiving institution:**
Name:  
Phone number:  
Function:  
E-mail:  

Myself

We will send you the name