Department of Aeronautics

Health and Safety Induction Pack

(Updated 2nd September 2013)
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**Introduction**

Health and safety depends on co-operative efforts by all. The Aeronautics Department expects staff, students and visitors to recognise that they have a clear duty to take care for the health and safety of themselves and others and co-operate fully with health and safety arrangements made by the department or the University. It is an offence for anyone to intentionally or recklessly interfere with or misuse anything provided in the interests of health, safety or welfare. This pack briefly covers some of our health and safety policies but more comprehensive information for both the Department and the College can be found at the links below.

**Quick Contacts**

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Extension</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Officer</td>
<td>Dr Nigel MacCarthy</td>
<td>45043</td>
<td><a href="mailto:n.maccarthy@imperial.ac.uk">n.maccarthy@imperial.ac.uk</a></td>
</tr>
<tr>
<td>First Aid</td>
<td>Ian Pardew/Andy Wallace</td>
<td>45060</td>
<td></td>
</tr>
<tr>
<td>COSHH assessor</td>
<td>Roland Hutchins</td>
<td>45060</td>
<td><a href="mailto:r.hutchins@imperial.ac.uk">r.hutchins@imperial.ac.uk</a></td>
</tr>
<tr>
<td>Emergency</td>
<td>Imperial Security</td>
<td>4444</td>
<td></td>
</tr>
<tr>
<td>Health Centre</td>
<td></td>
<td>49375</td>
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**Aeronautics Department Health and Safety Information**

[http://www3.imperial.ac.uk/aeronautics/local/hs](http://www3.imperial.ac.uk/aeronautics/local/hs)

which contains all departmental information on our health and safety policies including:

- Fire Evacuation Procedures
- Guide to Experimental work in the Aeronautics Department
- Registration of Experiment and RAFT training.
- Unattended Running Safety Policy
- Safety Pack
- Safety Related Staff Structure
- Laboratory Supervisors
- Lone / Out of Hours working
- Electrical Safety
- Laser Safety in Aeronautics
- Downloadable Forms
- Computer Health & Display Screen Assessment
- Other Guidance Notes and Safety Information
- Safety meeting minutes
- Visitors, Contractors and short-term staff
Further information relating to any of these forms or other safety issues can be found at the Imperial College Health and Safety web pages at http://www3.imperial.ac.uk/safety

**Safety Induction**

It is College Policy that ALL new staff, undergraduate and postgraduate students undergo a Safety Induction. *ID Swipe cards will not be issued until this has been undertaken.*

Undergraduate and taught Postgraduate students must attend the scheduled Induction session held during the first week of the Autumn term (details of which are issued to students on their arrival and further information is contained in your ‘Start of Session’ packs). Students who arrive after the scheduled Induction session must arrange an induction session with the Teaching Office (ae.office@imperial.ac.uk)

New Non-taught postgraduates and all other staff should complete the on-line safety training course called MOST (Month One Safety Training). There is a test at the end of this, which must be passed. Please visit this link for more information: http://www.imperial.ac.uk/safety/most/

**Induction Requirements:**
a. Undergraduates: Attend the Safety Induction course at the start of term  
   New post-graduates and staff: Complete the on-line course: MOST

b. To obtain your ID Swipe Card, you must have taken one of the above. Any student arriving at the Security Desk without having completed the safety training will not be issued with a swipe card. Remember to also take your College Registration form.

The security office (169 Sherfield Building) is open Monday to Friday 08.30-10.30, 12.00-14.00 and 15.45-16.45. For further information requiring your ID swipe card please go to http://www3.imperial.ac.uk/facilitiesmanagement/security/services/idcard

Further safety induction information can be found at http://www3.imperial.ac.uk/staffdevelopment/safety/induction
Health Centre

The Health Centre can be contacted on extension 49375 in normal working hours (08.00 - 18.00). OUT OF HOURS: contact Sherfield Security on extension 58900 or 58920.

Safety Officer

Dr Nigel MacCarthy

Room E353, ACE Building, Extn:45043, email: n.maccarthy@imperial.ac.uk
EMERGENCY PROCEDURES

IN AN EMERGENCY
1. Dial 4444 or 020 7589 1000 from a mobile phone.
2. Tell security which service you require: FIRE, POLICE, or AMBULANCE

IF YOU DISCOVER A FIRE
1. Immediately operate the nearest alarm call point.
2. Warn people in the vicinity of the fire.
3. Attack the fire, if possible, with the appliances provided but without taking personal risks.

ON HEARING THE FIRE ALARM  (Continuous Bell)
1. Leave the building by the nearest available exit.
2. Close all doors behind you.
3. Proceed to your Assembly Point. (Aeronautics Car Park)

IMPORTANT NOTES

DO NOT USE LIFTS,
DO NOT STOP TO COLLECT PERSONAL BELONGINGS,
DO NOT RE-ENTER THE BUILDING UNTIL AUTHORISED TO DO SO
DO NOT WALK THROUGH THE BUILDING TO GET TO AN EXIT CLOSER TO THE ASSEMBLY POINT. USE THE NEAREST EXIT
SPECIFIC REQUIREMENTS FOR EMPLOYEES & STUDENTS

1. All new personnel must attend departmental safety events(s)
2. They must read the college safety policy and the departmental safety policy
3. All accidents and dangerous occurrences must be reported
4. All experimental work must be registered
5. PPE (personal protective equipment) must be worn when directed to do so
6. Procedures to be followed in the case of fire must be known
7. Know who can give first aid

ACCIDENTS AND DANGEROUS OCCURRENCES

All Accidents and Dangerous Occurrences must be reported to the Departmental Safety Officer, so that they can be recorded and sent to the college safety department. Alternatively a form can be completed online from the college safety website:

http://www3.imperial.ac.uk/safety/formsandchecklists/accidents

Send the completed form to the department's Safety Officer.

Personal Protective Equipment (PPE)

Personal Protective Equipment is supplied for your safety, and must be used where required. Overalls may be purchased through Mr G. Senior (45041 E151). UG's will not normally be expected to provide their own safety shoes but PG's and RA's should be aware that there are areas in the department, which require their use. PLEASE NOTE OPEN-TOED SHOES / SANDALS ARE UNACCEPTABLE IN ALL CASES.

Safety Induction Course

It is College Policy that ALL new staff and students carry out a Safety Induction. U.G.'s will attend a safety lecture within the department.
Web based Information

Safety courses and checklists are available on the Imperial College safety unit web site:

http://www3.imperial.ac.uk/staffdevelopment/safety

Further information is also available on the occupational health service web site:

http://www3.imperial.ac.uk/occhealth

Safety notice-board

Information relating to safety and occupational-health issues are displayed on the safety notice-board located on level 3 ACE building outside

SPECIAL PRECAUTIONS

Chemical Hazards

COSHH (Control of Substances Hazardous to Health) regulations 2002.

The COSHH assessor must be informed before ANY chemical/hazardous substances are purchased or used in the department. These range from powders to adhesives, paints to cleaning products.

An assessment will be carried out, this only takes a few minutes and is a legal requirement.

Substances must not be poured down sinks or drains. Disposal of chemicals waste will be arranged through the departmental safety officer.

The COSHH assessor is: Roland Hutchins, E160 (Main Workshop) Extn: 45060
email:r.hutchins@imperial.ac.uk
Electrical Hazards

Electrical Safety Officer: -
Dr Nigel MacCarthy  Ext: 45043 Room E353  Background Yellow

Advice on electrical problems can be obtained from Dr MacCarthy. Consult him before using any electrical equipment other than for scheduled experiments.

Lasers

Laser Safety Officer: -
Dr. N. MacCarthy (n.maccarthy@imperial.ac.uk), Ext. 45043, Room E353  Background Yellow

Lasers are used in this department under strict control. The areas are marked with the above signs.

Radiation Hazards

Radiation Advice: -
Mr G. Senior (g.senior@imperial.ac.uk), Ext. 45041, Room E151  Background Yellow

The Radiation Signs indicate danger areas. Ionising radiation is used in this department under strict control. The areas are marked with the above signs.
Biological Hazards

Biological Safety Officer: -
Professor D. Doorly (d.doorly@imperial.ac.uk), Ext. 45049, Room 258

Although very infrequent within the Aeronautics department; advice on biological problems can be obtained from Professor Doorly. Consult him before any biological related experiments are performed.
FIRST AID (Normal College Hours)

ASSISTANCE

Assistance may be obtained from any of the following:

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Internal Tel.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. I. Pardew</td>
<td>Main Workshop, ACE level 1</td>
<td>45060</td>
</tr>
<tr>
<td>Mr. A. Wallace</td>
<td>Main Workshop, ACE level 1</td>
<td>45060</td>
</tr>
</tbody>
</table>

FIRST AID HINTS

1. Ensure your own safety first.
2. Call for the assistance of a First - Aider or Dial 4444 (020 7589 1000 from mobile)
3. Never move an unconscious casualty.
4. Stop bleeding by direct pressure to wound and elevating the limb.
5. Ensure patient has free access to fresh air. If he is not breathing attempt mouth to mouth resuscitation.

FIRST AID KITS

First Aid Kits are available where the White Cross Sign is displayed. (Green Background)

Rooms 157, E151, 263, 358, 153 & E150

ELECTRIC SHOCK

1. Ensure your own safety first.
2. Do not take risks of shock yourself.
3. Isolate supply if possible.
4. Call for assistance immediately.
LABORATORY WORK

Use of Laboratories and Risk Assessment Foundation Training (RAFT)

Everyone wishing to carry out experiments in the laboratories of Aeronautics will be required to take the Risk Assessment Foundation Training (RAFT) and subsequent test.

NOTE: This does not apply to students doing Laboratory Tutorials or attending Laboratory demonstrations

The course will be delivered by the Virtual Learning System 'Blackboard' and your enrolment will be made when you submit a Registration of Experiment form. For those who have previously submitted registration of experiment forms, you will automatically be enrolled.

Blackboard link (use your college login and password)

http://learn.imperial.ac.uk

The RAFT course material should take you no more than a few hours (maximum) to complete and you will have two attempts to pass the subsequent test. The pass mark is 80%. When you have passed, you will receive an approval certificate which will allow you access to our laboratories. Please print it and keep it with you. If you have any problems with the course or test, please come and see me or your supervisor for advice and further information.

A draft copy of the approval certificate and a copy of the new Registration of Experiment form can be found at;

- Draft copy of Approval Certificate
- Registration of Experiment form

Please come and see the safety officer or your supervisor if you have any questions or need any further help.

RAFT WEB LINK;

http://www3.imperial.ac.uk/staffdevelopment/safety/index/raft/raftpremay2009
What is RAFT about?

RAFT is a realistic and practical way to learn about the College’s risk assessment process via video scenarios based on one’s own work environment. After an introduction on why risk assessments are required, the learner is taken through the process of risk assessment before engaging with a series of video scenarios representative of their own work environments. They have to use one of the College forms to conduct risk assessments and a risk matrix to help identify significant risk. There are also sections on risk increasing factors such as lone working and working outside of one’s own department or offsite.

Why do I need to take RAFT?

It will help you to comply with College policy and legislation; you will be able to identify information relating to hazards, their controls and emergency procedures, which must be exchanged between employer, staff, visitors and contractors - part of the legal requirement of the Health and Safety at Work Act, 1974. As a result, your workplace and that of your colleagues will benefit from being safer and healthier – and there may be an associated cost benefit as sometimes the controls in use are unnecessary or ineffective.

RISK ASSESSMENTS

REQUIRED BY:

1. The management of health and safety at work regulations 1992
2. Control Of Substances Hazardous to Health regulations 2002 (COSHH)
3. Health and safety (DISPLAY SCREEN EQUIPMENT) regulations 2002

WHAT IS A RISK ASSESSMENT?
The process whereby the hazards associated with an activity are identified and the likelihood that these will cause harm is estimated

RISK = HAZARD x ( LIKELIHOOD OF OCCURRENCE )

WHY IS RISK ASSESSMENT IMPORTANT?

RISK ASSESSMENT IS CARRIED OUT TO:

- Identify the relative importance or risks
- Obtain importance about the extent and nature of risks
- Help decide on control methods

AND
• Risk assessment helps decide where to target prevention and control measures

General Laboratory Safety Procedures in Aeronautics

Requirements & Regulations

• All projects/experiments must be registered (see Academic supervisor)
• C.O.S.H.H. assessments must be carried out on any chemicals used.
• All lasers must be registered (see Mr Nigel MacCarthy)
• All work involving ionising radiation must be registered (see Mr Gary Senior)
• All work involving biological materials must be registered (see Professor Dennis Doorly)

Good Laboratory Practise

• Always leave the door unlocked
• No-one may carry out hazardous work without another person being within call
• Good housekeeping is essential for a safe environment
• No chemical may be put into the drains or placed in the rubbish bins

LATE WORKING

The normal working hours are from 09.00 to 18.00 Monday to Friday. Anyone needing to work in a laboratory or wind tunnel outside of these hours must meet the following criteria:

1. A late working form must be completed BEFORE starting (available from DSO)
2. A valid registration of experiment form and Risk Assessment must be available.
3. Students must carry their college ID Card.
4. Ensure that you know the location of your nearest Emergency Exit.

5. Report any accident or emergency to Security Ext. 4444 or 020 7589 1000 (mobile)

**Quick Student Guide to Conducting Experiments**

[http://www3.imperial.ac.uk/aeronautics/local/hs](http://www3.imperial.ac.uk/aeronautics/local/hs)

1. Read the “Guide to Experimental Work in Aeronautics”
This document will give you valuable general information about our experimental services as well as safety information. Talk to your supervisor as early as possible about safety and your experiment.

2. Download a *Registration of Experiment* form
When should I do this? As soon as you decide you wish to conduct experiments. The earlier the better. All forms and other information can be found on the Aeronautics department Health and Safety pages at the link given above.

3. Fill in the form and get it signed by your supervisor
Note: Forms cannot be accepted without all the information completed including signatures.

4. Give the form to the Safety Officer (Dr MacCarthy)
You can hand this in to Room E353, pass it under the door, or put it in Dr MacCarthy’s pigeon hole in the general office. You will be registered onto RAFT (Risk Assessment Foundation Training) course, which will show up in your Blackboard (Virtual Learning Environment)

5. Study the course material and take the online test
All this should be carried out within the Blackboard environment.

6. Pass the test
Your results will go to Dr MacCarthy and you will be emailed with a *Laboratory Approval Certificate*. You will also be entered onto the departmental database as someone who is authorised to carry out experimentation in Aeronautics.
The certificate lasts for the duration of your study at Imperial. You do not have to complete this process again, but you will need a new Risk Assessment for EACH experiment you conduct.

7. Keep your Approval Certificate with you in the Laboratory
You may have to show it to a laboratory supervisor

8. Complete a RISK ASSESSMENT (RA)
When should I do this? When you have setup your experiment, but before you test. (you should consider safety during the design phase and write up your RA accordingly)
Remember; If you change your experiment, or setup a new experiment, then a new Risk Assessment will be required.

9. Sign and Submit the RA
Make two copies of the signed forms and give one to the Safety Officer and keep one with you in the lab.
HAZARD WARNING SIGNS (BSI)

1. The **black** triangle, with a **black-on-yellow** pictogram, indicates a **warning**
2. The **red** circle with crossbar and a **black-on-white** pictogram, denotes a **prohibition**
3. The **blue** circle, with the pictogram imposed in **white** denotes **obligation**, or **instruction**
4. The **green** square, with the pictogram in **white**, is for **information**

**SMOKING**

As with the rest of the college, smoking is **STRICTLY PROHIBITED** in the Aeronautics Department