

# School of Biological Sciences



## Honours Projects: Local Health & Safety

**SAFETY  
DOESN'T  
HAPPEN BY  
ACCIDENT.**

CREATIVE  
Safety Supply

  
**KEEP  
CALM  
AND DO A  
Risk  
Assessment**

Rosaleen Hynes  
Health & Safety Co-ordinator

# H&S Responsibilities



- Queen's University Safety Policy:

‘It is the University's policy to ensure, so far as is reasonably practicable, the health, safety and welfare of all its staff and students...’

Ultimate responsibility: The Vice Chancellor & Senate

School responsibility: HOS

Supervisors

Laboratory Managers & Technicians

**You**

- You have a legal obligation to prevent accidents and personal injury to yourself, colleagues and members of the public
- You are required to co-operate with your Supervisor in matters of H&S
- You must not intentionally interfere with anything provided for the purposes of H&S

# Hazards You May Encounter



## **Due to Location when sampling in the field;**

- Water
- Heights,
- Adverse Weather
- Unfriendly Animals



## **Due to Nature of experimental work;**

- Radiation
- Infectious agents
- Toxic/Flammable/Explosive/Carcinogenic or Teratogenic Chemicals



# Risk Assessments:



Assess Risk:-

- 1. Identify hazards
- 2. Devise working procedure to minimise risk

$$\text{Risk} = \text{Hazard} \times \text{Likelihood}$$

Record Risk Assessment



**Risk Assessments only required where there are identified hazards**

# Project work: Supervisors' H&S responsibilities



- Supervisors are responsible for ensuring all projects are properly risk assessed, documented and comply with H&S requirements: Fieldwork, COSHH, radiation, GMO etc.
- Supervisors must ensure students complete risk assessments
- Discuss RA and complete under guidance of Supervisor
- **Risk Assessments are there to protect you**
- **Risk assessments should be completed before commencing work**



# Sources of H&S Information

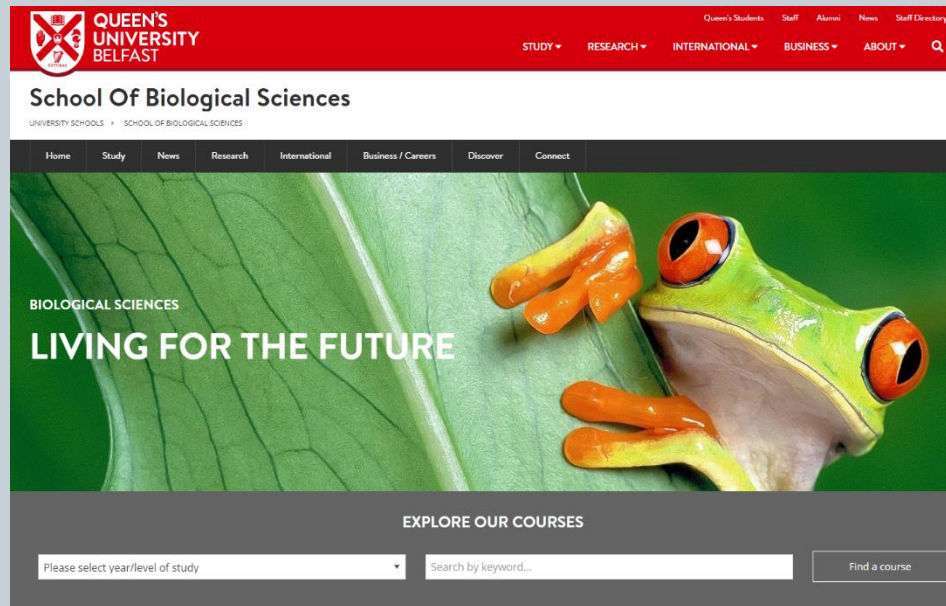


University Safety Service website

<https://www.qub.ac.uk/directorates/EstatesDirectorate/UniversitySafetyService/>

Local Health & Safety Information available on school webpage

<http://www.qub.ac.uk/schools/SchoolofBiologicalSciences/>



# School of Biological Sciences - Webpage



## Latest News



### LIFE IN THE GINGERBREAD HOUSE: HOW FISH NEED

Life in the gingerbread house: how fish need jellies more than we thought  
21 March 2019



### LATEST NEWS

New International Partnership for Vietnamese Students  
14 March 2019



Royal Society of  
Biology

### LATEST NEWS

Royal Society of Biology Accreditation  
7 March 2019

## GET IN TOUCH

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## SAFETY INFORMATION

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### Contact Us

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Emergency T: +44 (0)28 9097 2222

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### About Queen's

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# School of Biological Sciences - Webpage

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UNIVERSITY  
BELFAST**

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## Safety Information

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**THE SCHOOL OF BIOLOGICAL SCIENCES**  
**SAFETY INFORMATION**



General Safety Information: School of Biological Sciences

School Safety Manual

School Safety Contacts & Risk Assessment Procedure



# School Safety Webpage



General Safety Information: School of Biological Sciences

[School Safety Manual](#)

[School Safety Contacts & Risk Assessment Procedure](#)

[Honours Project Safety](#)

[Postgraduate Safety Induction](#)

[General Risk Assessment Form](#)

[University Safety Services Website](#)

## Fieldwork Safety

- [Fieldwork Health and Safety \(guidance for supervisors\)](#)
- [Fieldwork Health and Safety Questionnaire](#)
- [Guidance on Health and Safety in Fieldwork](#)
- [Generic Boating Fieldwork Risk Assessment and Guidance Notes](#)
- [Generic Intertidal Fieldwork Risk Assessment and Guidance Notes](#)
- [River Fieldwork Risk Assessment+Guidance notes](#)
- [Terrestrial Fieldwork Risk Assessment+ Guidance](#)

## Biological Safety

- [Infectious Agents & GMO's](#)
- [GM Animal Risk Assessment](#)
- [GM Plant Risk Assessment](#)
- [GMM Risk Assessment](#)
- [QUB GMO Induction](#)
- [QUB Genetic Modification Code of Practice](#)
- [BioCOSHH Risk Assessment](#)

## Chemical Safety

- [COSHH flowchart](#)
- [COSHH guidance](#)
- [QUB COSHH Risk Assessment](#)

# School Safety Contacts & RA Procedure



General Safety Information: School of Biological Sciences

School Safety Manual

School Safety Contacts & Risk Assessment Procedure

## School Safety Contacts:

- H&S Co-ordinator – Dr Rosaleen Hynes [r.hynes@qub.ac.uk](mailto:r.hynes@qub.ac.uk)
- COSHH Adviser – Ms Katrina O'Connor [biolsci.safety@qub.ac.uk](mailto:biolsci.safety@qub.ac.uk)
- Radiation Protection Adviser – Dr Kostya Panov [k.panov@qub.ac.uk](mailto:k.panov@qub.ac.uk)
- Biohazards/GMO Safety Adviser – Dr Mark Robinson [mark.robinson@qub.ac.uk](mailto:mark.robinson@qub.ac.uk)
- Environmental/Fieldwork Adviser – Ms Gillian Riddell [g.riddell@qub.ac.uk](mailto:g.riddell@qub.ac.uk)
- Diving & Boating Officer & QML H&S Contact- Mr Simon Exley [s.exley@qub.ac.uk](mailto:s.exley@qub.ac.uk)
- IGFS H&S Contact – Dr Brett Greer [brett.greer@qub.ac.uk](mailto:brett.greer@qub.ac.uk)
- University Biological Safety Officer – Dr David Norwood [d.norwood@qub.ac.uk](mailto:d.norwood@qub.ac.uk)

# School Contacts & RA Procedure



## **Risk Assessments:**

### **Completed RAs to be submitted electronically to the appropriate adviser for approval:**

COSHH: – hazardous chemical substances and/or carcinogens, mutagens.

Complete the QUB COSHH RA → COSHH Adviser – Ms Katrina O'Connor  
[biolsci.safety@qub.ac.uk](mailto:biolsci.safety@qub.ac.uk)

BioCOSHH – biological materials, infectious agents

Complete QUB bioCOSHH RA → Biohazards/GMO Safety Adviser - Dr Mark Robinson  
[mark.robinson@qub.ac.uk](mailto:mark.robinson@qub.ac.uk)

GMO – All GM work must be registered with HSE (NI) - requires initial QUB approval:

Complete appropriate GMM RA, GM Plant RA or GM Animal RA → University Biological Safety Officer – Dr David Norwood [d.norwood@qub.ac.uk](mailto:d.norwood@qub.ac.uk)

Fieldwork:\*

Complete appropriate School of Biological Sciences Fieldwork RA  
(Terrestrial/River/Intertidal) → Environmental/Fieldwork Adviser - Ms Gillian Riddell  
[g.riddell@qub.ac.uk](mailto:g.riddell@qub.ac.uk)

Boating: \*

Complete School of Biological Sciences Boating RA → Diving & Boating Officer – Mr Simon Exley [s.exley@qub.ac.uk](mailto:s.exley@qub.ac.uk)

Diving: Contact Simon Exley [s.exley@qub.ac.uk](mailto:s.exley@qub.ac.uk) for further guidance

\*School Health & Safety Questionnaire must also be completed

A Lone Working form should be completed if required

# Risk Assessments



- QUB COSHH & BioCOSHH -school safety webpage

## Biological Safety

- Infectious Agents & GMO's
- GM Animal Risk Assessment
- GM Plant Risk Assessment
- GMM Risk Assessment
- QUB GMO Induction
- QUB Genetic Modification Code of Practice
- BioCOSHH Risk Assessment**

## Chemical Safety

- COSHH flowchart
- COSHH guidance
- QUB COSHH Risk Assessment**

**COSHH Risk Assessment Form**

A COSHH risk assessment must be conducted before you commence work which could expose you to substances hazardous to health.

**Section 1: Project Details**

Undergraduate Practical / Project	Masters	Postgraduate	Postdoctoral	Staff	Other

Group or teaching year: (if applicable) \_\_\_\_\_  
School / Centre: \_\_\_\_\_  
Title of project or activity: \_\_\_\_\_  
Location of work: (building and room number) \_\_\_\_\_  
Principal Investigator / Supervisor: \_\_\_\_\_  
Person carrying out assessment: \_\_\_\_\_  
Assessment Date: \_\_\_\_\_ Review Date: \_\_\_\_\_  
Detailed description of work activity: (include quantities of substances to be used and how they are to be used i.e. moved, heated etc.) \_\_\_\_\_

**Section 2: Hazard Summary Section**

Hazard pictograms – select all that apply to the work activity

Explosive	Flammable	Corrosive	Toxic	Irritant	Oxidizing	Highly flammable	Highly corrosive	Highly toxic

Biological      Radioactive

**Queen's University Belfast**  
BioCOSHH Risk Assessment

A BioCOSHH risk assessment is required for work with biological agents and hazards. The form should be completed and signed by the principal investigator. The possession or use of any Hazard Group 3 biological agent or the Hazard Group 2 biological agents *Bordetella pertussis*, *Corynebacterium diphtheriae* and *Neisseria meningitidis* requires permission from the University Safety Service.

**Section 1 Project or Activity**

1.1: Brief description of project or activity \_\_\_\_\_

**Section 2 Hazards**

2.1: Biological agents or hazards

Pathogens (ACDP/DEFA Hazard Group 1)	
Pathogens (ACDP/DEFA Hazard Group 2)	
Pathogens (ACDP/DEFA Hazard Group 3)	
Toxins	
Carcinogens	
Allergens	
Human primary or continuous cell cultures	
Animal primary or continuous cell cultures	
Human cells or tissues	
Human blood or blood components	
Other human samples (Sputum, Pus, Urine, Faeces, Other bodily fluids)	
Patient contact	
Animals (Laboratory/Domestic/Farm/Wild)	
Animal cells or tissues	
Plants	
Soils	
Other biological hazards	

If a respiratory pathogen/risk of aerosols from dried culture please provide details in Section 3.4

2.2: Human diseases, illnesses or conditions associated with biological agents or hazards

Please consult the Health Protection Agency website <http://www.hpa.org.uk> or QUB Occupational Health for information regarding signs/symptoms

2.3: Potential routes of infection

Inhalation ☐ Ingestion ☐ Injection ☐ Absorption ☐ Other ☐ \_\_\_\_\_ Select all that apply

# Safety Contacts & Risk Assessment Procedure



## **Risk Assessments:**

**Completed RAs to be submitted electronically to the appropriate adviser for approval:**

COSHH: – hazardous chemical substances and/or carcinogens, mutagens.

Complete either the School of Biological Sciences COSHH RA/QUB COSHH RA → COSHH Adviser – Ms Katrina O'Connor [biolsci.safety@qub.ac.uk](mailto:biolsci.safety@qub.ac.uk)

BioCOSHH – biological materials, infectious agents

Complete QUB bioCOSHH RA → Biohazards/GMO Safety Adviser - Dr Mark Robinson [mark.robinson@qub.ac.uk](mailto:mark.robinson@qub.ac.uk)

GMO – All GM work must be registered with HSE (NI) - requires initial QUB approval:

# Risk Assessments:



COSHH RA also includes:

- Disposal
- Accidental Spillage/Exposure
- Appropriate PPE (lab coat, gloves, safety glasses)
- Consult Material Safety Data Sheets (MSDs) – Sigma Aldrich
- **Approved RA in place**
- Add name, read and sign to confirm following procedure – retain copy in laboratory workbook

The image displays a COSHH Risk Assessment Form and a corresponding poster. The form is titled 'COSHH Risk Assessment Form' and includes a warning: 'A COSHH risk assessment must be completed before you commence work which could expose you to substances hazardous to health.' It is divided into two main sections. Section 1, 'Project Details', contains fields for 'Principal Investigator / Supervisor', 'Assessment Date', and 'Review Date', along with a table for 'Person carrying out assessment' with columns for 'Principal Investigator / Supervisor', 'Masters', 'Postgraduate', 'Postdoctoral', 'Staff', and 'Other'. Section 2, 'Hazard Summary Section', includes a table for 'Hazard pictograms' with columns for 'Toxic', 'Corrosive', 'Flammable', 'Explosive', 'Irritant', 'Harmful', 'Very Toxic', 'Very Corrosive', 'Very Flammable', 'Very Explosive', and 'Very Irritant'. The poster on the right is titled 'HAZARDOUS SUBSTANCES' and 'COSHH Regulations (Control Of Substances Hazardous to Health)'. It features a vertical stack of hazard pictograms: Toxic, Harmful, Corrosive, Very Toxic, Very Corrosive, Very Flammable, Very Explosive, and Very Irritant. Below the pictograms, it states 'Information sheets on hazardous substances for managers and users'.

# GMO & Radiation Risk Assessments



- GMO – All GM work registered with HSE (NI) requires approval from within QUB
- Discuss with PI
- GMO Induction on school safety webpage
- Complete appropriate [GMM RA](#), [GM Plant RA](#) or [GM Animal RA](#) → University Biological Safety Officer – Dr David Norwood [d.norwood@qub.ac.uk](mailto:d.norwood@qub.ac.uk)



- RADIATION - Must be registered for work within the school
- Radiation Adviser - Dr Kostya Panov [k.panov@qub.ac.uk](mailto:k.panov@qub.ac.uk)
- Lab bench training provided and recorded
- QUB COSHH RA required



# Risk Assessments: Fieldwork



- Generic Fieldwork RAs with guidance notes– School safety webpage eg. Terrestrial/River/Intertidal

## Fieldwork Safety

- Fieldwork Health and Safety (guidance for supervisors)
- Fieldwork Health and Safety Questionnaire
- Guidance on Health and Safety in Fieldwork
- Generic Boating Fieldwork Risk Assessment and Guidance Notes
- Generic Intertidal Fieldwork Risk Assessment and Guidance Notes
- River Fieldwork Risk Assessment+Guidance notes
- Terrestrial Fieldwork Risk Assessment+ Guidance



- Fieldwork – Environmental/Fieldwork Adviser - Ms Gillian Riddell  
[g.riddell@qub.ac.uk](mailto:g.riddell@qub.ac.uk)



# Risk Assessments: Fieldwork



- Tailor to your own situation – exclude irrelevant details
- Visit/gain knowledge of site before completing the RA



- Diving & Boating Officer - Simon Exley [s.exley@qub.ac.uk](mailto:s.exley@qub.ac.uk)

# Risk Assessments: Fieldwork



- In addition to RA all students must complete **Health & Safety Questionnaire** – held by Supervisor in confidence or consult with University Occupational Health

Queen's University Belfast  
School of Biological Sciences  
FIELD WORK HEALTH AND SAFETY QUESTIONNAIRE

Please fill out this CONFIDENTIAL Health and Safety questionnaire and return it to your supervisor - this is required both to ensure your health and safety and to comply with University policy.

Student Name: \_\_\_\_\_

IF YOU HAVE A CONDITION WHICH MAY AFFECT YOUR HEALTH AND SAFETY BUT YOU DO NOT WISH TO COMPLETE THIS QUESTIONNAIRE OR TO DISCUSS IT WITH YOUR SUPERVISOR, PLEASE TICK THIS BOX ☐ AND ARRANGE AN APPOINTMENT WITH DR. TODD IN QUB OCCUPATIONAL HEALTH TO DISCUSS THIS IN CONFIDENCE.

Do you currently or have you suffered in the last ten years from any of the following:

Heart and Circulatory Disorders	Yes	No
Heart problems (including angina, murmurs or valve problems)	<input type="checkbox"/>	<input type="checkbox"/>
High Blood Pressure	<input type="checkbox"/>	<input type="checkbox"/>
Low Blood Pressure	<input type="checkbox"/>	<input type="checkbox"/>
Raynaud's Disease	<input type="checkbox"/>	<input type="checkbox"/>

If yes to any of above, does this stop you from doing physical exercise?  
Please state what you would not be happy doing: ☐ ☐

Medical Conditions Yes No

- Supervisor's responsibility to check if **health surveillance** required eg. Poultry - Exposure to asthmagens – consult with University Occupational Health
- **Lone Working not permitted**

# Risk Assessments:



- All risk assessments should be completed under the guidance of your supervisor and then submitted **electronically** to the appropriate school safety adviser for approval.
  - Safety adviser may provide feedback and further guidance before approving
  - Approved risk assessments should be signed and copies retained by those carrying out the procedure, their supervisor and the appropriate school safety adviser.
- 
- **Retain a copy in your laboratory workbook**

  
COSH Risk Assessment Form

A COSHH risk assessment must be conducted before you commence work which could expose you to substances hazardous to health.








Section 1: Project Details


Undergraduate Practical / Project	Masters	Postgraduate	Postdoctoral	Staff	Other

Group or teaching year: (if applicable)  
School / Centre:  
Title of project or activity:  
Location of work: (building and room number)  
Principal Investigator / Supervisor:  
Person carrying out assessment:  
Assessment Date: Review Date:  
Detailed description of work activity: (include quantities of substances to be used and how they are to be used i.e. mixed, heated etc.)

Section 2: Hazard Summary Section

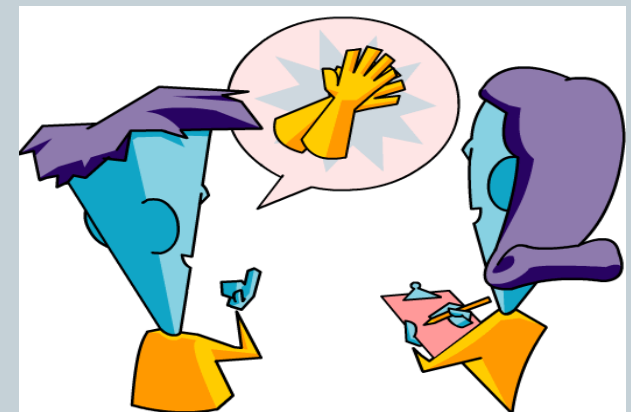
Hazard pictograms – select all that apply to the work activity

									
Harmful	Toxic	Corrosive	Irritant	Harmful	Oxidizing	Explosive	Corrosive	Highly flammable	Extremely flammable

   
Biological Radioactive

# Project work: Supervisors' H&S responsibilities

- Supervisors are responsible for:
- Providing suitable and sufficient training and instruction
- Ensuring you are competent and understand risks & controls
- Providing appropriate supervision to ensure you are following the correct procedures



# Fitness to Work



Inform Supervisor of medical conditions relevant to role:

- Back injuries
- Disabilities
- Awaiting/recovery from surgery
- Pregnancy/ recent childbirth
- Temporary ill health



- Advice from University Occupational Health Service

# Emergencies



## Medical emergency: Illnesses, accidents....

- Contact Local First Aider
- Familiarise yourself with location of local first aid equipment and qualified first aiders.
- First Aid Contact Lists displayed in labs and on all first aid boxes.



Major Allergies – advise Supervisor/Academic in charge

## Defibrillator – Ground Floor Reception Area

- List of trained personnel contacts



# Lone Working/Out-of-hours working



Normal Working Hours 7:00am – 7:00pm Monday –Friday

Lone working not normally permitted for UGs

- Exceptional Circumstances – Application through Supervisor
- Low risk procedures
- Specific Lone working application and approval process

Exceptional Circumstances:

- Out of Hours – Security 2222
- Know local emergency number



# Emergencies

## Fire!



### Discover A Fire:

- Know how to raise the alarm (shout Fire/ break glass points)
  - Know all Emergency Exit routes
  - Know Assembly points
  - Evacuate immediately no matter what!
- 
- Report details to fire personnel





# Fire



- On hearing the fire alarm:
- Immediately evacuate the building by the nearest emergency exit
- Do not use lift
- Assemble at the designated assembly point:



## **Footpath on Chlorine Gardens or Lennoxvale**

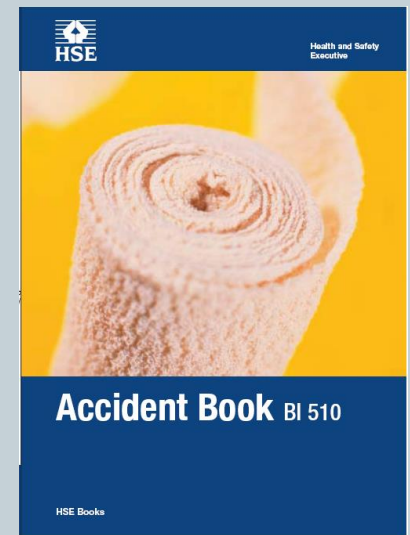
- Do not re-enter the building until you are told to do so by a fire warden or other personnel responsible for fire safety

Weekly Fire Alarm Test (Tuesday Morning- short ring)

# Accident & Incident Reporting



- Report all accidents/incidents to staff member in charge - even when no treatment is required
- Report accidents ASAP
- Accident Recorded by relevant staff
- First Aid Required – complete Accident Book (School Office – Mary Devlin)
- Co-operate in documenting what occurred/was witnessed
- Report incidents of verbal or physical abuse



# Safe Use of Work Equipment



- QUB approved equipment only
- School responsible for maintenance & testing
- Report defects
- Switch off after use



# Slips, Trips and Falls



- Prompt cleaning of spillages
- No tripping hazards, such as trailing leads
- Reporting of defects in floors and stairs
- Suitable footwear



# Need advice?

## Points of contact within School



### Supervisor

- H&S Co-ordinator – Dr Rosaleen Hynes [r.hynes@qub.ac.uk](mailto:r.hynes@qub.ac.uk)
- COSHH Adviser – Ms Katrina O'Connor [biolsci.safety@qub.ac.uk](mailto:biolsci.safety@qub.ac.uk)
- Radiation Protection Adviser – Dr Kostya Panov [k.panov@qub.ac.uk](mailto:k.panov@qub.ac.uk)
- Biohazards/GMO Safety Adviser – Dr Mark Robinson [mark.robinson@qub.ac.uk](mailto:mark.robinson@qub.ac.uk)
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- University Biological Safety Officer – Dr David Norwood [d.norwood@qub.ac.uk](mailto:d.norwood@qub.ac.uk)
- School Safety Webpage -  
<http://www.qub.ac.uk/schools/SchoolofBiologicalSciences/SafetyInformation/>