



THE UNIVERSITY
OF BIRMINGHAM

Health and Safety Guidance

Guidance for Academic Supervisors and Others who may be Supervising Academic Work

GUIDANCE/16/SAW/00

This document is intended to clarify health and safety responsibilities and give guidance to those who are responsible for supervising the work or study activities of other academic staff, postgraduate and undergraduate students and visitors.

Whilst the responsibility for health and safety at Budget Centre level rests ultimately in the Head of the respective Budget Centre, in practice the responsibility is discharged by the individuals who plan and supervise the work or activities.

This document consists of guidance on

- The general principles of supervision
- Undergraduate and Taught Postgraduate Laboratory Work
- Undergraduate and Postgraduate Project Work
- Student Placements

Further information and advice may be obtained from the University Health and Safety Unit
Tel. 45251 FAX 43309.
Information is also available at <http://www.bham.ac.uk/Safety Unit/>

February 2000 (Telephone numbers amended October 2001)
GUIDANCE/16/SAW/00

CONTENTS

	PAGE
1. General Principles	1
The Work	1
Persons being Supervised	2
Persons Supervising	2
The Working Environment	3
2. Supervision Assessment	3
3. Taught Laboratory Work	5
4. Project work	7
5. Suggested Assessment Process	8
APPENDIX	
Appendix 1 Taught Laboratory work: Academic Course Planner's Check List	9
Appendix 2 Taught Laboratory Work: Class Supervisor's Check List	11
Appendix 3 Examples of Health and Safety Information on Laboratory Sheets	13
Example 1 from a Civil Engineering laboratory class sheet	13
Example 2 from a Manufacturing and Mechanical Engineering laboratory class sheet	14

Guidance for Academic Supervisors and Others who may be Supervising Academic Work

GUIDANCE/16/SAW/00

1. GENERAL PRINCIPLES

In general, health and safety supervision should be integrated into the normal arrangements for overall supervision; i.e. the role of the supervisor should be to ensure that work activities are performed satisfactorily and safely.

The nature and degree of health and safety supervision required will vary according to:

- the work;
- the persons doing the work;
- the person supervising the work;
- the work environment, including when it is being done.

Supervisors have to assess what level of supervision is required and what is practical.

The level of supervision depends on many factors and it is not possible or desirable in this document to lay down hard and fast rules for all situations requiring supervision. The supervisor has to make a judgement based on a risk assessment as to the level of supervision required. Persons with little training, experience or skill will need close supervision even for quite simple tasks, but this can be reduced as skill and experience develop.

For low risk work, little safety supervision will be necessary, but for higher risk work where the situation could develop in an unexpected and hazardous way, then close supervision is essential.

When making supervision arrangements the following points should be included:

- the supervisor should have the authority to direct those being supervised;
- the process should be checked to ensure that supervision is in place;
- cover for absence of supervisors should be arranged in advance;
- particular attention should be paid to out-of-hours and lone working.

The Work

Work according to well-established procedures

Persons directly supervising persons in places such as most undergraduate laboratories, workshops, offices and in activities away from the campus, are responsible for ensuring that the work is carried out in accordance with well-established procedures, which have been approved by the person with managerial responsibility for that work. Such procedures should cover the method and order of work, use of protective clothing and equipment and any special precautions which are necessary.

Open-ended situations

In other more open-ended situations, such as experimental research and development work, exploratory field work, etc., it is not always possible to predict with certainty all the possible ways that the situation might develop, although from experience and careful risk assessment it should be possible to identify likely problems in advance. Here the nature of supervision takes on a different character and must include the need to review the progress of the work at appropriate intervals so that the next stage of work can be considered, agreed and precautionary measures specified. In such situations any departures from expected conditions must be the subject of review by the supervisor, and the supervisor must clearly specify stages in the progress of the work when a review is required.

Some work or activity will take place away from a person's base and direct supervision. Assessment of the likely tasks should identify areas of greatest risk and local procedures developed to eliminate or control those risks.

Persons being Supervised

Undergraduate students

They should be considered as inexperienced and with limited skills. They will require close supervision in most cases.

Postgraduate students

Whilst having greater experience than Undergraduates, nonetheless may not have much practical experience or awareness of hazards and risks associated with their work. It is not a reasonable assumption that a holder of a first degree in a subject is fully conversant with the health, safety and environmental consequences of research work in that subject. It is particularly important to provide training and closer supervision where postgraduates students are crossing disciplinary boundaries to work on areas without previous experience (e.g. engineering graduates working with biological materials).

Staff

Staff, especially new staff, will need more supervision until their supervisor is confident of their competence to do the job safely. Local risk assessments should identify the need for supervision of staff.

Visitors

Where possible the level of experience and where relevant qualification of visitors should be ascertained before their arrival. Long term visitors (from weeks to months) will need to be assessed on arrival for their competence and a judgement made on the need for supervision. Short term visitors (days) may need to be supervised unless well known, for example from previous visits.

Persons Supervising

The prime consideration is **competence** to provide the supervision. Key considerations are:

- an understanding of the work involved;
- a knowledge of the hazards and risks associated with that work;
- a knowledge of the appropriate precautions to prevent or control those risks;
- a knowledge of the local arrangements for controlling those risks;
- a knowledge of any emergency measures, should problems arise;
- the ability to communicate with and direct those being supervised.

A further important consideration is the **status** of persons supervising and their authority to deal with matters that arise should be considered. Supervisors must have the authority to take action to prevent risks.

Academic staff, technical staff and postgraduate students may all be called upon to supervise students. Guidance on responsibilities and necessary actions to fulfil those responsibilities may be found in sections 3 and 4.

Although not ideal it is possible that supervision may be provided by a person who is not an employee of the University. If this is the case it is particularly important for the Head of Budget Centre to ensure that this person is competent and made aware of local arrangements and emergency procedures and understands the responsibilities of a supervisor.

The Working Environment

The level of risk will depend upon the activity (e.g. hazardous materials being handled or heavy objects being moved), the place in which the work is being done and other activities in the same place. Risk assessment should have identified the significant risks.

In routine activities in a workplace intended and designed for the purpose, supervision should be part of the normal procedure. However, situations away from the campus or in novel work locations will need more particular attention. Local conditions may affect the safety of an activity so that risks are significantly greater. Fieldwork is a prime example where climatic conditions may effect people and equipment adversely. Extremes of temperature, presence of water, confined spaces, traffic safety and the fact that persons may be working alone are further examples of issues that might arise away from the normal working environment. Risks from work carried out in the community should be considered.

Working at or Visiting Other Establishments

Whilst working at or visiting establishments which are not under the control of the University of Birmingham, staff and students of this University must comply with the safety requirements of those establishments and with their arrangements for safety supervision. Supervisors of such persons have a responsibility to check that the host employer is contacted and that arrangements for the health and safety of their staff or student are in place.

2. SUPERVISION ASSESSMENT

The following scheme gives a guide to assessing the level of supervision necessary.

A simple risk assessment should be carried out identifying significant risks associated with the work. The assessment should place the project into one of four categories of supervision (using the matrix below).

The matrix considers the worst likely consequences against the experience and competence of the students.

	Possible level of harm			
	Negligible	Minor	Major	Fatal
Experienced and Competent	Insignificant	Insignificant	Medium	High
Aware and with basic skills	Low	Low	Medium	High
Limited experience and skills	Low	Medium	High	High

Key

- Insignificant* - no special supervision arrangements
- Low* - where limited supervision is necessary
- Medium* - where the work should not start until approved by the supervisor
- High* - where that work must not start without direct supervision
- Negligible* - the risk of any injury or ill-health is not significant
- Minor* - the worst likely consequence is a minor injury such as a trapped finger, minor cuts and bruises (except where a cut could lead to infection or entry of a toxin into the body)
- Major* - the worst likely consequence is a significant injury, such as broken bones, serious burns, major cuts and bruising, cuts where there is a risk of infection, or significant risks to health, such as exposure to pathogens or toxic substances
- Fatal* - the possibility of fatal injury cannot be eliminated, such as access to live electrical equipment, falls from height, working with extremes of pressure or highly explosive substances

Where supervision requirements are limited supervisors or their nominated deputies should normally be available and readily contactable for consultation.

NB Assessors should work on the assumption that undergraduates should not be left unsupervised in environments where other risks are accessible to them.

3. TAUGHT LABORATORY WORK

This section provides guidance in the table below on responsibilities and necessary actions to fulfil those responsibilities when organising and running taught laboratory work.

Person	Responsibilities	Action	Additional Information
Head of School	Ensure suitable health and safety arrangements are in place for the planning and conduct of laboratory work.	Written arrangements detailed in local health and safety policy. <i>General Guidance (GUIDANCE/9/HSGG/98)</i> leaflets distributed to students.	UHSP/0/99 <i>Health and Safety Policy</i> . GUIDANCE/15/MHSBC/00 <i>Management of Health and Safety within Budget Centres</i> .
Academic who plans laboratory class	Discuss risks and suitable control measures with class supervisors and technicians.	<i>Academic Course Planner's Record: Laboratory Work</i> (Appendix 1) should be filled in as appropriate.	GUIDANCE/17/RA/00 <i>Risk Assessment</i> . UHSP/8/SSOHA/96 <i>Out of Hours Activities and Unattended Equipment and Apparatus</i> .
	Ensure risk assessments are completed. Include information about risks in course material.	Complete risk assessment forms. Sufficient practical detail of risks and control measures should be included on laboratory sheets.	School documentation.
Class supervisor (academic, PGTA, technician)	Be familiar with hazards and risks and control measures.	Ensure you have information in advance. <i>Class Supervisor's Record: Laboratory Work</i> (Appendix 2) should be filled in as appropriate.	
	Ensure students follow safety procedures.	Ensure students have information. If work is being carried out in an unsafe manner you have the authority to suspend it.	For PGTAs see note a(ii) attached to temporary contract.
Students	Be familiar with safety information. Comply with instructions. Report if anything goes wrong.	Read information and instructions and ask if unsure.	<i>General Guidance (GUIDANCE/9/HSGG/98)</i> leaflet. Safety instructions on laboratory sheets (see Appendix 3 for examples).

Note

Health and Safety advice is available from your local Safety Co-ordinator.
If further advice is required contact the University Health and Safety Unit.

This page is intentionally blank

4. PROJECT WORK

Project work referred to in this section is work undertaken by students largely on their own initiative without the necessary presence of their academic supervisor; e.g. postgraduate research and undergraduate final year project work.

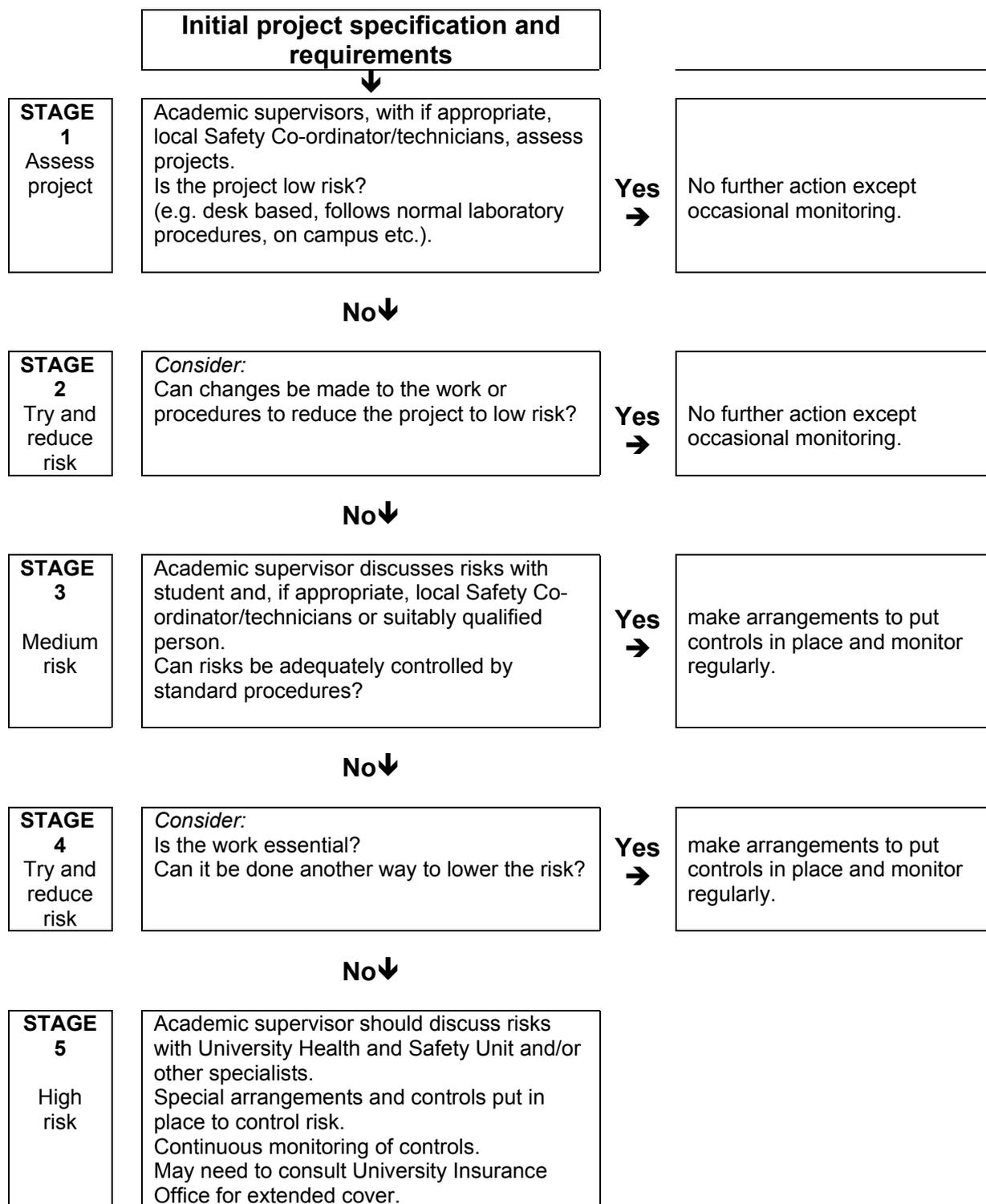
This section comprises a table of responsibilities, and a safety process flow chart.

Person	Responsibilities	Action	Additional Information
Head of School	Ensure suitable health and safety arrangements are in place for the planning and conduct of project work.	Written arrangements detailed in local health and safety policy. <i>General Guidance (GUIDANCE/9/HSGG/98)</i> leaflet distributed to students.	UHSP/0/99 <i>Health and Safety Policy</i> . GUIDANCE/15/MHSBC/00 <i>Management of Health and Safety within Budget Centres</i>
Project Supervisor	At project conception consider possible health and safety risks and controls.	When planning project and resources required consider health and safety.	
	Before project starts discuss risks and suitable control measures with student(s) (and local Safety Co-ordinator and technicians if appropriate). Ensure risk assessments are completed.	Assess and document risks in conjunction with student(s). Sufficient practical detail of risks and control measures should be included in project details.	GUIDANCE/17/RA/00 <i>Risk Assessment</i> . UHSP/8/SSOHA/96 <i>Out of Hours Activities and Unattended Equipment and Apparatus</i> . School documentation. May be part of the student(s) project to identify risks and control measures.
	Ensure control measures are adhered to during project and students follow safety procedures.	Ensure students have information. Regularly monitor project work. If work is being carried out in an unsafe manner it is your duty to suspend it.	
	Ensure additional risks are identified and controlled.	Review and update project specific safety procedures throughout project.	
Students	Be familiar with safety information. Comply with agreed procedure. Report if anything goes wrong.	Discuss and develop safety procedures with supervisor throughout project.	<i>General Guidance (GUIDANCE/9/HSGG/98)</i> leaflet.

Note

Health and Safety advice is available from your local Safety Co-ordinator.
If further advice is required contact the University Health and Safety Unit.

5. SUGGESTED ASSESSMENT PROCESS



It is anticipated that the majority of projects will be of low risk (Stage 1), some medium risk (Stage 3) and only a few, if any, high risk (Stage 5).

APPENDIX 1

Taught Laboratory Work: Academic Course Planner's Record

School/Department: Laboratory Class: Name of course planner:	Course Code:
---	---------------------

To be completed by the academic who plans the laboratory class

1. Experimental Risks

The hazards, risks and control measures have been discussed with the staff and others concerned for each experiment?

 tick box
 Yes

All the risk assessments have been carried out?

 tick box
 Yes

Were any significant risks identified that could not be eliminated?

 Yes No
tick yes or no

If **yes**, list control measures in place:

2. Class Supervisor(s) Awareness

Name(s) of class supervisor(s):

Class supervisor(s) have been made aware of their duties and the risks and precautions associated with the work?

 tick box
 Yes

3. Student Awareness

Are there any special hazards and procedures that the students need to be aware of?

 Yes No
tick yes or no

If **yes**, these are detailed on the laboratory sheets?

 tick box
 Yes

Signature of Academic Course Planner

Date

This page is intentionally blank

APPENDIX 2

Taught Laboratory Work: Class Supervisor's Record

School/Department: Laboratory Class: Name of Class Supervisor:	Course Code: Room:
---	---

To be completed by laboratory class supervisors

1. Experimental Risks

I have read and understood the documentation for the experiment? *tick box*
Yes

I am aware of the hazards and risks associated with this experiment? *tick box*
Yes

I am familiar with the measures that are in place to control these risks? *tick box*
Yes

2. Student Safety

Students have got the appropriate documentation? *tick box*
Yes

Students have been told to report if anything goes wrong? *tick box*
Yes

**Remember: you must ensure students follow safety procedures.
If work is being carried out in an unsafe manner you have the authority to suspend it.**

3. Emergency Procedure

As the person in charge of the class you must be aware of what to do in the event of an emergency.

I know the procedure in the event of a minor accident? *tick box*
Yes

I know the procedure in the event of a major accident? *tick box*
Yes

To ensure that you are aware of key information that you may need in an emergency you must fill in the pro forma overleaf.

Signature of Class Supervisor	Date
--------------------------------------	-------------

APPENDIX 3

EXAMPLES OF HEALTH AND SAFETY INFORMATION ON LABORATORY SHEETS

Example 1 from a Civil Engineering laboratory class sheet

WQM3 - EFFLUENT TREATMENT - PRACTICALS

Objectives

To examine aspects of waste water treatment which have been discussed in the lecture course and thus enhance the lectures.

SAFETY

In addition to following the basic University safety requirement, the additional points which must be considered during this practical are:

- *Handling sewage sludge* *Wear gloves and eye protection*
- *Counting bacteria* *Do not open the Petri dishes*
- *Personal hygiene* *At the end of the laboratory, WASH YOUR HANDS*

Details of laboratory work then follow.....

Example 2 from a Manufacturing and Mechanical Engineering laboratory class sheet

Data Acquisition Laboratory: D32 Controlled Water System with Feedback

Safety:

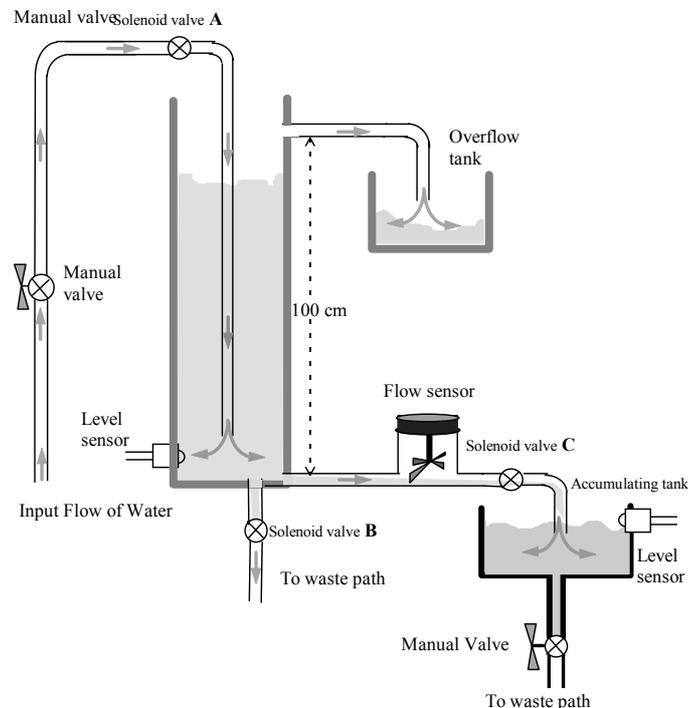
- Normal Safety precautions apply (as outlined in the 'Health and Safety - General Guidance' booklet)
- Additional risks/precautions: Risk of water overflow onto electrical equipment - do not leave rig unattended.

1. Aim

The main aim of this lab is utilisation of a general purpose digital and analogue input/output interface card to perform a simple control task. The objective is to develop a software program for controlling the water rig in order to fill a container with water in the shortest possible time without overflowing. For this purpose various signals should be sent and received to/from interface card.

2. The Test Rig

The particular test rig to be studied and controlled is shown in the following figure:



(First page of laboratory sheet)