



JOINT BOARD OF MODERATORS

ANNEX D – HEALTH AND SAFETY RISK MANAGEMENT

Context

The decisions individuals make in the execution of civil engineering projects have an impact on the health and safety of others. The impact will be on those who are directly or indirectly involved with the project, throughout its life from design to demolition. Legislation puts duties onto all people involved in realizing projects, and students must both understand the seriousness of these duties, and develop a mind-set that enables them to fully discharge their responsibilities. However in addition to statutory obligations good safety risk management brings wider business benefit.

Aims

A thread of health and safety risk management running through the programme will enable students to become tuned to the need to manage health and safety risks and have a basic grasp of the practical application of risk management more generally.

Knowledge and understanding

The thread of health and safety risk management running through the programme should enable a student to:

- Understand the concepts of hazard & risk.
- Identify hazards.
- Estimate the significance of risks by attributing severity and likelihood and be able to sort these risks in priority order.
- Understand how risks can be mitigated and the importance of communicating residual risks to others.
- Understand that all decisions, whether in design or construction, potentially have an impact on how safe a project is to build, operate, maintain and demolish.
- Be aware of key legislation relating to health & safety including:
 - The Health and safety at Work etc Act 1974¹
 - The Workplace (Health, Safety and Welfare) Regulations 1992.
 - The Management of Health & Safety at Work Regulations 1999.
 - The Construction (Design & Management) Regulations 2007.
- Understand the meaning of competency of individuals and organisations.
- Understand how changes on a project require a reassessment of risks.

¹ Or the Health and Safety at Work Order 1978 in NI

Intellectual Abilities

The student should be able to:

- Demonstrate the process of identifying hazards, estimating and prioritizing risks.
- Mitigating risk, and managing residual risks and reviewing the risks in the light of the progress of the project – in the context of a design project or laboratory experiment.
- Use a famous failure case study to explain how things go wrong and the issues raised in this annex.
- Explain current industry initiatives in respect of health and safety risk.

- Explain what the unusual risks are on a piece of work, and be able to distinguish these from ordinary or minor risks.

Practical Skills

The student should be able to:

- Undertake the elimination of hazards and reduction of risks (commonly called a 'risk assessment') from scratch for an aspect of project work (laboratory or field work) which documents the risks which are specific to the work.
- Conduct themselves appropriately when undertaking field or laboratory work.

General Transferable Skills

- Ability to think out of the box and challenge assumptions.
- Teamwork.
- Communication skills.

Method of Teaching, Learning and Assessment

Teaching would be both through specific modules and by raising awareness of the behaviors and attitudes required throughout the degree programme. Case studies of failures, site visits and practical laboratory work are all important vehicles for teaching this subject.

The JBM recommends that the three sets of guidelines (Annexes B, C & D) be considered together, especially in relation to teaching and learning methodology and assessment.