

# Safety in Design

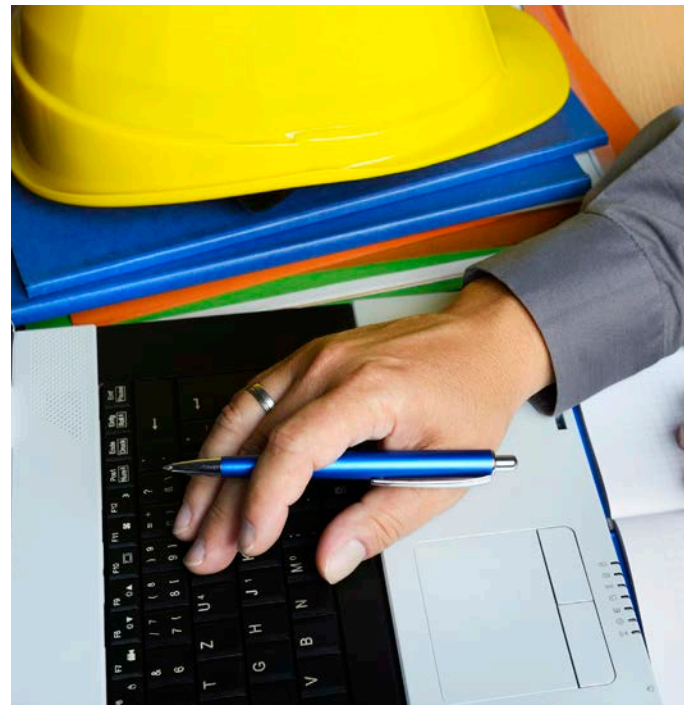
## Module 1: The Theory

### Providing Solutions to Potential Damage During Detailed Design

The detailed design phase of a product / plant / facility presents a unique opportunity to identify and mitigate potential damage for future users (constructors, operators, maintainers). The role of the Designer is crucial in identifying and mitigating future potential damage. To these users the cost of retrofitting or changing design features during operation is 3 - 10 times the cost of identifying the preferred design features and constructing accordingly at the outset.

Many organisations have adopted the scientifically based Damaging Energy Framework for identifying Hazards in their workplace. This Framework is used by InterSafe in design standards, design reviews, workplace inspections, audits and incident investigations. The Damaging Energy Framework is a powerful predictor for future damage during the design process.

**This course is suited to designers, draftpersons, engineers, specification writers and their leaders.**



### Outcomes of this Course

This course is designed to assist participants to:

1. Understand the Pareto Principle (80/20) and how it applies to design.
2. Understand the Damaging Energy Framework, and those Damaging Energies which are most likely to produce fatal or permanent damage to people.
3. Obtain a deeper understanding of Human and Gravitational Energies.
4. Evaluate the effectiveness of existing and proposed controls for Human, Gravitational and Vehicle Energies by reference to Haddon's Energy Management Strategies.
5. Understand the 'Health, Safety and Environment in Design Philosophy' document with its associated design criteria.
6. Understand the critical issues associated with detailed design reviews (both formal and informal).



## Course Outline

### 1. Foundational Concepts

- The Pareto Principle
- Words Have Meaning and Affect
- The Scientific Method

### 2. Classification of Personal Damage

- Damage vs Harm / Injury / Illness / Disease
- Class I / Class II / Class III Damage

### 3. Size of the Personal Damage Problem

- Cost of Personal Damage
- Pareto Focus

### 4. The Likelihood of Personal Damage

- Likelihood of Fatality
- Likelihood of Permanent Personal Damage

### 5. Damage as a Consequence of an Energy Exchange

- Damaging Energy Classification System

### 6. The Pattern of the Personal Damage Problem – Taxonomies

- Introduction to Taxonomies
- Pareto Energies for Class I Damage

### 7. Damaging Energy Management Strategies

- Haddon's Management Strategies

## Course Detail

This 2 day course is normally delivered on-site using client training facilities for 12 - 15 persons.

The recipients receive a comprehensive set of reference materials.



## Other InFormed™ Courses and Resources

This course can be built on by a range of other courses and resources in the InFormed™ series, including:

- Safety in Design – Module 2: Leading a Review
- Safety in Design – Module 3: Critical Issues For Scoping and Auditing a Review
- Health, Safety and Environment (HSE) in Design Philosophy with associated Design Criteria

## Next Steps

If you would like to discuss an **InFormed™** course or how InterSafe could assist you please contact one of our team on:

**+61 7 3895 8111**

or [enquiries@intersafe.com.au](mailto:enquiries@intersafe.com.au)

## Who is InterSafe?

InterSafe specialises in incident investigation. InterSafe has assisted our clients in effectively controlling the future through preparation of more than 10,000 comprehensive incident reports (dealing mostly with fatal/permanently disabling occurrences) throughout 60 years of collective experience.

This experience has led to a unique way of thinking about, investigating and preventing incidents. InterSafe shares these powerful and effective investigation models and techniques through a range of courses and services.



# InterSafe

Protecting People

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