

IACS FSA TRAINING COURSES

IACS FORMAL SAFETY ASSESSMENT (FSA) TRAINING

1 Day Course and 3 Day Course

What is FSA?

FSA is a rational and systematic process for assessing the risks associated with shipping activity and for evaluating the costs and benefits of options for reducing these risks.

Application of FSA may be particularly relevant for proposals for rules and regulatory measures which have far reaching implications in terms of costs to the maritime industry or the administrative or legislative burdens which may result. This is achieved by providing a clear justification for proposed measures and allowing comparison of different options of such measures to be made. This is in line with the basic philosophy of FSA in that it can be used as a tool to facilitate a transparent decision-making process. In addition, it provides a means of being proactive, enabling potential hazards to be considered before a serious accident occurs.

COURSE OBJECTIVES

The objectives of the IACS FSA Training Course are

- To establish a common understanding of the FSA methodology amongst the maritime community.
- To provide basic information of the sequence of analysis steps within FSA and about methods typically applied.
- To demonstrate the application of specific analysis techniques by providing examples and case studies.

It should be noted that the training is not intended to enable trainees to carry out an FSA on their own, but to provide a basic understanding of the FSA methodology, the tools and techniques used, as well as its advantages and limitations.

Levels of Training

The Training is presented at two levels:

- Level 1 (½ or 1 Day Course)

This level is aimed at giving a fairly high level overview of the FSA process. It will enable the participant to understand the FSA methodology, including how it can be applied and what results can be obtained. At this level the 'Management Module' will be presented.

- Level 2 (3 Day Course)

This level is aimed at giving a detailed overview of the FSA process, including exercises and case studies. This will give the trainees a detailed understanding of the FSA methodology. At this level, modules 1 to 9 listed below will be presented.

FSA Training Course Contents

The IACS Level 1 training package consists of the following module:

Management Module:

This module gives the background and overview of the FSA methodology, an introduction to basic concepts of risk assessment, and the use of FSA for rule-making purposes.

The IACS Level 2 training package consists of 9 modules, as follows:

Module 1 (Overview):

This module is an abbreviated version of the Management Module and is given together with the modules 2 to 9.

Module 2 (Hazard Identification):

This module gives a detailed introduction to Step 1 in the FSA process, including the objectives, procedures and techniques which can be used (What-If Analysis, HAZOP, Human HAZOP, FMEA etc.) to identify and evaluate hazards.

Module 3 (Hazard Identification - Exercise and Case Studies):

This module gives a number of case studies and exercises related to Step 1 in the FSA process.

Module 4 (Risk Assessment):

This module gives a detailed introduction to Step 2 in the FSA process, including the objectives, procedures, techniques which can be used (Event Trees, Fault Trees, Human Reliability Analysis, etc.), data requirements and the use of expert judgement.

Module 5 (Risk Assessment - Details and Examples):

This module gives further details, examples and exercises related to Step 2 in the FSA process, including basic probability theory, data analysis, Event and Fault Tree construction and Human Error Analysis.

Module 6 (Risk Control Options and Risk Acceptance Criteria):

This module gives a detailed introduction to Step 3 in the FSA process, including Risk Control Options and Risk Acceptance Criteria.

Module 7 (Cost Benefit Assessment):

This module gives a detailed introduction to Step 4 in the FSA process, including quantification of costs, benefits and cost effectiveness.

Module 8 (Risk Control Options and Cost Effectiveness - Case Studies):

This module gives a number of case studies related to Steps 3 and 4 of the FSA process.

Module 9 (Recommendations for Decision Making):

This module gives a detailed introduction to Step 5 in the FSA process, including the purpose, decision process, presentation of results and uncertainties.

TRAINING CONTACT DETAILS

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COST

Course costs and other details should be obtained from the individual society.