



Safety cases provide a formal argument, supported by evidence, that a system is acceptably safe for a given application in a specified environment. This course draws on best practice from a variety of situations and uses ERA Technology's extensive experience in both assessing and developing safety cases in accordance with commercial and military safety critical systems requirements.

This course is designed for those responsible for developing and managing safety cases, and also anyone who is required to accept a safety case or safety case report as a deliverable from a contractor. The course explains why safety cases are required and how to present a safety case in the most compelling manner. It will provide middle and senior managers with the confidence to know if a safety case is complete and sufficient for the Duty Holder to demonstrate his duty of care.

This course will provide delegates with a historical foundation for the legal requirements of a safety case. It explains the terms used and, gives hands-on practice in developing a system loss model through a risk assessment and ALARP workshop. The course will also demonstrate the variety of methods for producing safety case arguments.

### Your programme

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|---|--|
| <b>08.45</b> Registration and refreshments  | <b>12.45</b> Lunch   |
| <b>09.00</b> <b>Introductions</b>   | <b>13.30</b> <b>Safety case methodology</b>  |
| <b>09.15</b> <b>Purpose of a safety case</b>  | <ul style="list-style-type: none"><li>• Development of a safety case argument</li><li>• Case study on the use of GSN (Goal Structuring Notation)</li><li>• Soft/cultural factors.</li></ul>                        |
| <ul style="list-style-type: none"><li>• Key reasons for preparation of a safety case</li><li>• Discuss historical incidents and their impact on legislation</li><li>• Corporate manslaughter and current legislation.</li></ul> | <b>14.15</b> <b>Syndicate GSN Exercise</b>   |
| <b>10.00</b> <b>Safety concepts</b>   | <b>15.00</b> Refreshments  |
| <ul style="list-style-type: none"><li>• Safety definitions</li><li>• Principles of hazard identification and risk assessment.</li></ul>   | <b>15.15</b> <b>Other safety argument construction software</b>  |
| <b>10.45</b> Refreshments   | <ul style="list-style-type: none"><li>• Examples of the use of safety case argument software tools using:<ul style="list-style-type: none"><li>- GSN</li><li>- Claims, arguments and evidence.</li></ul></li></ul> |
| <b>11.00</b> <b>Hazard log management</b>   | <b>15.45</b> <b>Safety case report structure</b>   |
| <ul style="list-style-type: none"><li>• Development of the loss model</li><li>• Risk management through the loss model</li><li>• Maintenance of the hazard log.</li></ul>   | <ul style="list-style-type: none"><li>• Examples of report structures as provided in standards and other recognised publications.</li></ul>  |
| <b>11.30</b> <b>Risk assessment and ALARP master class</b>  | <b>16.15</b> <b>Summary</b>  |
| <ul style="list-style-type: none"><li>• Application of the principles of risk assessment</li><li>• Exploring the application and limitations of the ALARP principle.</li></ul>  | <b>16.30</b> Close.  |

#### Related course

#### Hazard and Risk Analysis for Safety-Related Systems

4-5 October 2011

For more information or to book a place on this course, please visit: <http://shop.era.co.uk>

#### Ever thought about in-company training?

This course can be delivered at your site. To discuss your training requirements, please call the Events Team on +44 (0)1372 367439.

## Your speakers



### Michael Salter - Principal Consultant, ERA Technology Ltd

Michael has over 20 years' experience working in aviation design, operating management and procurement in the civilian and defence sectors. Since working at ERA Technology Ltd, Michael has been involved with the MoD as an independent safety advisor in their through life management of the Hercules C-130 and E-3D. He also represents ERA Technology on the ADS Military Aviation Safety Group and the MoD Joint Airworthiness Committee.



### Beth Bateman - Senior Safety Engineer, ERA Technology Ltd

Beth has undertaken a range of safety engineering activities including the provision of safety and human factor consultancy and safety assessments. Working in the defence, aviation and rail industries she has provided consultancy and support to ensure applications are safe, developed and managed in accordance to the appropriate standards.

## Booking form

Please photocopy this form if you wish to register more than one delegate. Send a second person at a discounted price!

### Delegate details

Name <small>Dr Mr Mrs Miss</small>
Job Title
Organisation
Address
Postcode
Telephone
Fax
E-mail
VAT number (EU customers only)
<input type="checkbox"/> Please tick if you are happy to receive further information about ERA Technology Ltd via e-mail. It is our policy NOT to supply your details to third parties.

### Bookings

I wish to make a firm booking for:

#### Understanding Safety Cases: Development, Maintenance and Your Responsibilities

13 October 2011 Ref: 31136     9 May 2012 Ref: 31214

### Fees\*

Fee rate	Fee	VAT@20%	Total	Please tick
Early Booking Rate	£432.00	£86.40	£518.40	
Standard Rate	£480.00	£96.00	£576.00	

\*AccessERA subscribers and additional delegates receive a 10% discount on these rates. If you subscribe to AccessERA and would like to use your AccessERA credits to attend, please contact the Events Team on: +44 (0)1372 367439. For more information on booking rates, please go to: <http://shop.era.co.uk>.

### Payment method

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BC12..... Date.....

### Venue:

Your course will take place at ERA Technology Ltd, Cleeve Road, Leatherhead, Surrey KT22 7SA, UK. It is a 15 minute walk from Leatherhead main-line station. Visitor car parking is available on-site. A location map and directions are available at: [www.era.co.uk/location](http://www.era.co.uk/location).

### Early booking rates:

Early booking rates are valid up to one calendar month before the date of the course and can only be claimed at the time of booking.

### Additional booking rates:

Additional booking rates are applicable to second and subsequent delegates and may only be claimed at the time of booking.

### Did you know?

An AccessERA subscription is an excellent way of accessing technical advice and information in the right format at the right time. All AccessERA subscribers receive a 10% discount on the current course price at time of booking when the booking is made directly with the Events Team. To find out more, please call us on: +44 (0)1372 367439 or e-mail: [events@era.co.uk](mailto:events@era.co.uk).

### Ways to book:

- <http://shop.era.co.uk>  
Total security is assured and normal booking conditions apply.
- +44 (0)1372 367439 - please be prepared to quote a purchase order number or supply us with credit card details.
- +44 (0)1372 367321\*
- The Events Team, ERA Technology Ltd, Cleeve Road, Leatherhead, Surrey KT22 7SA.

\* Please note that booking forms received without payment will be considered binding and invoiced automatically.

### Enquiries:

Please contact the Events Team by calling: +44 (0)1372 367439 or e-mail: [events@era.co.uk](mailto:events@era.co.uk).

### How to pay:

Payment must be made before attendance at the event and must be made in £ sterling only. Acceptable methods of payment are by cheque (payable to ERA Technology Ltd), credit card or bank transfer. Bank transfers, free of all charges, can be made to ERA Technology Ltd via: HSBC, 9 The Boulevard, Crawley, RH10 1UT; sort code: 40-18-22, account no. 22178095. When paying by bank transfer, please quote the relevant course, reference number and the delegate and company name.

### Cancellations and transfers:

Cancellations and transfers must be received in writing to the following address: The Events Team, ERA Technology Ltd - AccessERA, Cleeve Road, Leatherhead, KT22 7SA. Cancellations and transfers received up to the 15th working day prior to the event will be subject to a charge of 20% of the invoiced course fee + VAT or 20% of the AccessERA credits charged. After this 15 day deadline, transfers cannot be accepted and cancellations will be subject to payment in full or 100% of the AccessERA credits charged. Substitutions can be made at any time.

### ERA Technology Ltd:

ERA Technology Ltd works at the leading edge of advanced technology consultancy and design. The business provides specialist, high value-added, technology-based services including design and development, testing, assessment and expert advice. For further information visit: [www.era.co.uk](http://www.era.co.uk).

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