

## Course Outline

### *Introduction to Model-Based Systems Engineering*

- The need for MBSE
- The MBSE Mantra
- MBSE in One Slide
- The evolution of MBSE in your organisation

This introductory module establishes the need for MBSE, introduces the **MBSE Mantra** of People, Process & Tools, gives an overview of **MBSE in One Slide** and discusses the evolution of MBSE in your organisation.

### *Modelling*

- The importance of modelling
- Structural modelling with SysML
- Behavioural modelling with SysML
- The SysML diagrams

An essential enabler for MBSE is modelling. In this course we consider what we mean by a model, why, what, where, when and how we model in an MBSE approach.

We introduce the SysML modelling language, cover the two key aspects of modelling: structural modelling and behavioural modelling, and introduce the key SysML diagrams that are the most useful to someone starting in MBSE. The emphasis here is on how to model, rather than deep coverage of the syntax of the language, demonstrating how to build up a true, consistent collection of views that make up a model, rather than just a collection of pictures.

### *Overview of MBSE Concepts*

The key concepts associated with MBSE are described and, very importantly, the relationships between the concepts are explored.

### *The Workshop*

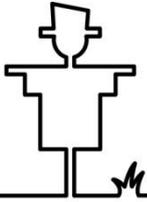
In order to put all of the pieces together and see how the modelling works, a team-based exercise is conducted where the participants get to use the concepts & modelling techniques covered on an example.

### *Implementing MBSE*

- The Business Case for MBSE
- The MBSE Mantra revisited: People, Process & Tools

This concluding section discusses the business case for MBSE and how to sell MBSE to different stakeholders within the business, as people in different roles will see different benefits of MBSE.

The three crucial enablers for MBSE are discussed in more detail: competent People with the right skills for their role, carrying out the Processes embodied in the underlying MBSE approach and using modelling Tools driven by the Process.



enquiries@scarecrowconsultants.co.uk

+44 (0)7725 848776

+44 (0)7955 460270

---

## SCARECROW CONSULTANTS

### Target Audience

This course is aimed at anyone who wants to find out more about MBSE, with a view to developing initial skills in MBSE. The course requires no prior knowledge of any specific notations, modelling languages nor tools.

### Benefits

The benefits of this course are as follows:

- Understand the need for MBSE and the importance of People, Process and Tools
- Understand the key concepts around MBSE
- Understand the activities necessary to see your organisation evolve into a mature MBSE organisation
- Understand the importance of modelling and its role in MBSE
- Understand what the SysML modelling language is...and isn't
- Understand the basics of the key SysML diagrams and can practice in their use
- Understand how to demonstrate the benefits of MBSE to stakeholders within the business.

All course delegates receive a full set of notes, summary sheets and a copy of the book 'Don't Panic! The Absolute Beginner's Guide to MBSE' by Jon Holt and Simon Perry.

### Course Tutors

All courses are delivered by Prof Jon Holt and Simon Perry. Jon and Simon are internationally-recognised authors, tutors and public speakers in the world of requirements engineering. They have authored 15 books covering many aspects of systems modelling, including process modelling, competence, architectures and, of course, model-based systems engineering.

### More Information

For more information on this course, or any of our other offerings, please contact Scarecrow Consultants Limited using the details above.