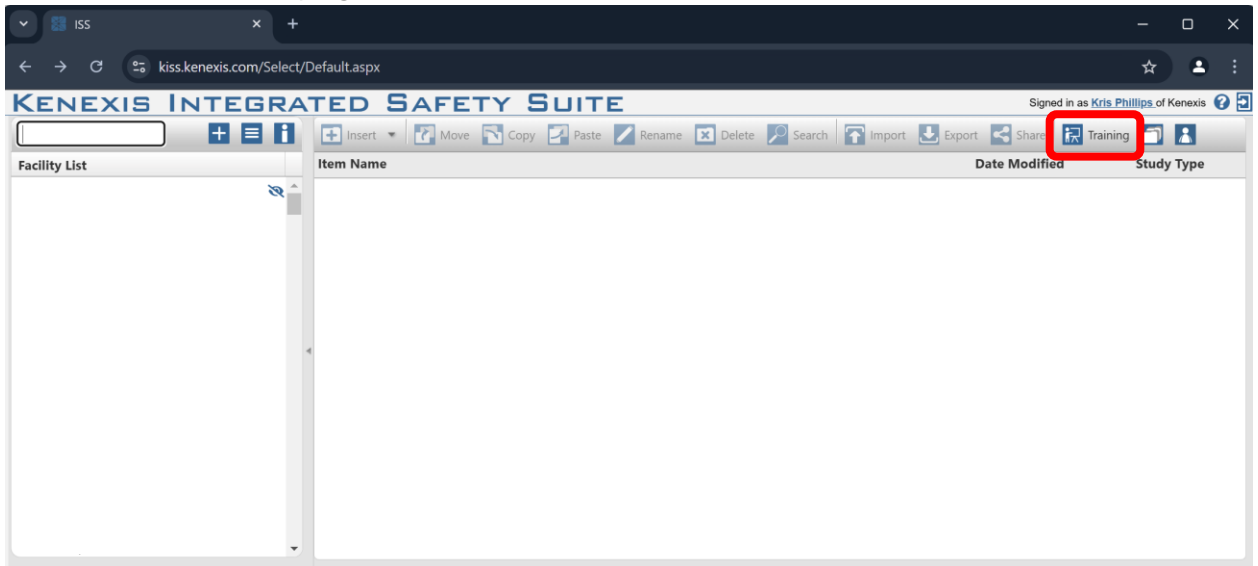




## PROCESS SAFETY TRAINING CENTER

Online Process Safety Training Library

- To access the Process Safety Training Center, log in to the Kenexis Integrated Safety Suite (KISS) at [kiss.kenexis.com](http://kiss.kenexis.com) using your credentials. After logging in, click the "**Training**" button located in the top right corner of the screen:



- After entering the learning center, click on the "**Browse Available Courses**" link to view a list of all the training classes available in the system:



## PROCESS SAFETY TRAINING CENTER

Online Process Safety Training Library

The Kenexis Process Safety Training Center is an ever growing library of online training for all things process safety.

Browse courses on a variety of topics from highly qualified experts, published authors and process safety professionals.

Course topics include:

- Process Safety Engineering
  - Process Hazards Analysis (PHA)
  - Layer of Protection Analysis (LOPA)
  - Safety Instrumented System Design
  - Fire & Gas System Design
- Use of Kenexis Software on the KISS Platform
  - Arbor - Fault Tree Analysis
  - Effigy - Fire and Gas Mapping
  - Open PHA - PHA/LOPA
  - Vertigo - SIS Lifecycle Management
  - OpScope - Procedure Design and Execution
- Past Kenexis Webinars

Get started now and check back often as we are rapidly adding great new training content all the time.

[Browse Available Courses](#)

[View My Courses](#)

Some course content can be viewed for free. Premium content can be accessed with an annual membership. Click the link below to learn more about membership options.

[Learn More About Annual Membership](#)

- The Learning Center lets licensed users access all available training courses while their license is active. When you select a training class, you'll see an overview of the course along with a button for one-click registration, as shown below:

### KENEXIS TRAINING

Signed in as Kris Phillips of Kenexis



[Back to Courses](#)

## Safety Instrumented Systems Overview and Awareness

Developed By Kenexis  
Presented By Edward M Marszal  
Professional Development Hours: 4

[Register](#)

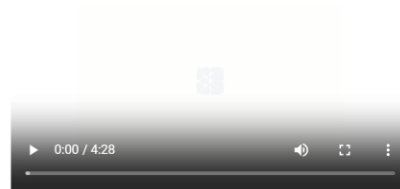
### Course Description:

#### Description:

Safety instrumented systems (SIS) are some of the most common and effective safeguards that protect process plants. Ensuring their appropriate design is a mission critical task that is typically performed in conformance with international standards such as IEC 61511 (2016) Functional Safety – Safety Instrumented Systems for the Process Industry Sector (or national versions, such as ISA 84.00.01 in the United States). This standard provides a safety lifecycle framework which guides the activities that should be accomplished to achieve functional safety, along with establishing the performance criteria, called Safety Integrity Levels (SIL) that define SIS performance. This course provides an overview and awareness level of discussion of SIS design that is appropriate for all personnel that interact with SIS in any way. The course includes informative examples that highlight the concepts of SIS design and employs a post instructional survey to ensure that the presented materials was understood and retained.

The intended audience for this overview and awareness class is everyone at a plant that might interact with a safety instrumented system, from upper management through maintenance, including engineers and operations. It goes over all phases and tasks that are part of the safety lifecycle, but only in enough detail to explain what happens and what the parameters are, in general.

Course Preview



- After clicking the Register button and selecting "**Start Course**," you'll be directed to the online course. From there, you can navigate through the course sections or click on "**Course Documents**" to download the associated workbook, study guide, and any other materials provided. As you move through the course, you'll have access to instructional videos and/or quizzes, as shown below.

The screenshot shows the Kenexis Training website interface. The top navigation bar includes the Kenexis Training logo, a user profile icon, and a 'Signed in as Kris Phillips of Kenexis' notification. Below the navigation bar is a toolbar with icons for home, documents, clipboard, grid, edit, print, and back. The main content area is divided into a left sidebar and a main video player.

**Sidebar:**

- Safety Instrumented Systems Overview and Awareness**
  - Back to Course Details
  - Table of Contents
  - Course Documents** (highlighted with a red box)
- Section 1 - Introduction
  - Scope and Objectives
  - Introduction
  - Application Exercise #1
  - Regulations & Standards
  - What is a "Standard" SIS Design
- Section 2 - Lessons Learned
  - Accident Case Histories** (highlighted with a red box)
  - Causal Factors

**Main Video Player:**

- Section 2 – Lessons Learned from Process Plant Accidents**
- Content: Causal Factors, SIS Implications
- Video: A man in a blue shirt speaking, with the 'SAFETY INSTRUMENTED SYSTEMS' logo overlaid.
- Progress: 0:05 / 14:33

- When you select a quiz, it will appear in a multiple-choice format as shown below:

The screenshot shows the Kenexis Training website interface with a quiz displayed. The top navigation bar and toolbar are identical to the previous screenshot. The sidebar shows the navigation structure, with 'Post Instructional Quiz' highlighted in a red box under 'Section 4 - SIS Overview Post Instructional Quiz'.

**Sidebar:**

- What is a "Standard" SIS Design
- Section 2 - Lessons Learned
  - Accident Case Histories
  - Causal Factors
  - Practical Example
- Section 3 - Safety Lifecycle
  - Safety Lifecycle
  - SIL Selection
  - Conceptual Design
  - SIL Verification
  - Detailed Design
  - Operations & Maintenance
- Section 4 - SIS Overview Post Instructional Quiz
  - Post Instructional Quiz** (highlighted with a red box)

**Main Quiz Content:**

- Post Instructional Quiz**
- Which of the following is the best definition of a Safety Instrumented System?**
  - A control loop whose failure may result in the initiating of a chain of events that could result in a hazardous outcome
  - Any instrumentation function that is related to process safety, such as a critical alarm or a manually activated shutoff switch
  - A programmable logic controller that is dedicated to safety functionality
  - An instrumented control system that detects "out of control" conditions and automatically returns the process to a safe state
- Which of the following is the best definition of a Safety Instrumented Function?**
  - All the safety functionality contained in a Safety Instrumented System
  - A function that is implemented by an SIS that is intended to achieve or maintain a safe state for a process with respect to a specific hazardous event