

R³S Training Directory

Giving staff at all levels the power to perform



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Training and upskilling must be tailored to the specific needs of different markets and jurisdictions.



Welcome to the R³S Training Directory

At RNA Analytics, training with our experts guarantees users access to the very latest technological capabilities, with both a global perspective and local precision.

We know from speaking with our clients that having access to expert local guidance, delivered via a consultative approach will expedite software integrations to drive measurable ROI, faster.

As a commercial enterprise, we understand the need to scrutinize all investment. An investment in technology and the know-how to get the best out of it.

We have designed a number of training courses, set at varying levels of expertise. We will also partner with you to develop a comprehensive training course with your specific goals in mind.

Email our R³S training team:

training@rnaanalytics.com

Value Added

- Learn from our R³S experts who consistently receive ratings of 'excellent'
- Share in a wealth of experience
- Refresh, update and develop your R³S knowledge
- Receive best practise guidelines and network with and learn from other R³S users
- An interactive engaging learning experience

1. Choosing the Right Course

We offer a range of training courses:

Scheduled courses

Standard training courses scheduled to run at RNA office locations and/or online. These are held as advertised on the RNA Analytics web site (www.rnaanalytics.com).

Unscheduled courses

Any of the standard training courses can be run at a mutually agreed date and venue (e.g. your offices or ours). This usually works out more economical than scheduled courses for 3 or more persons.

Tailored courses

We can create a course tailored to meet your user specific needs. This can be based on a combination of subjects from our various standard courses and advanced modules and also any content that is outside our usual offering across our tools R³S Modeler, R³S Process Manager and R³S Development Manager.

To get the most benefit from a course the delegate's objectives and existing experience must be matched to the course they want to attend. To help you make the right choice, this document covers the following information:

- A description of each course
- A comprehensive overview of each course
- Course pre-requisites and our recommendations

Courses follow this approximate timetable:

- 08:45 - 09:00 Registration
- 09:00 - 12:30 Course
- 12:30 - 13:30 Lunch
- 13:30 - 17:00 Course

What the Course Includes

- Full training materials to retain following the course
- Refreshments and lunch (only for courses delivered at RNA office)
- Laptops provided for all scheduled courses. If delegates wish to use their own laptop, prior notice must be given to allow time to install the training workspaces
- Certificates of completion can be delivered on request

Delegate numbers and trainers

A single RNA Analytics trainer can train up to six delegates. When this number is exceeded, additional trainers will be included to support the session. This ensures that each delegate receives the right level of attention.

We restrict the number of delegates to twelve per course to ensure the smooth running of the course.

Booking a course

- Courses are available to employees of any company that has licensed R³S Modeler.
- Fees associated with each course will be quoted upon request and include refreshments and lunch (where relevant).
- Invoices will be issued to the company after the completion of each training course.

For any training enquiry please contact training@rnaanalytics.com.

R³S Modeler is a current-generation risk and actuarial software tool designed to cater to the needs of insurers when complying with regulatory and other reporting requirements, undertaking product development, or investigating their risk exposure.

2. Life Modelling

Life Pre-requisite Course

Duration: 1/2 to 1 day

Type: Standard Self-study

Overview

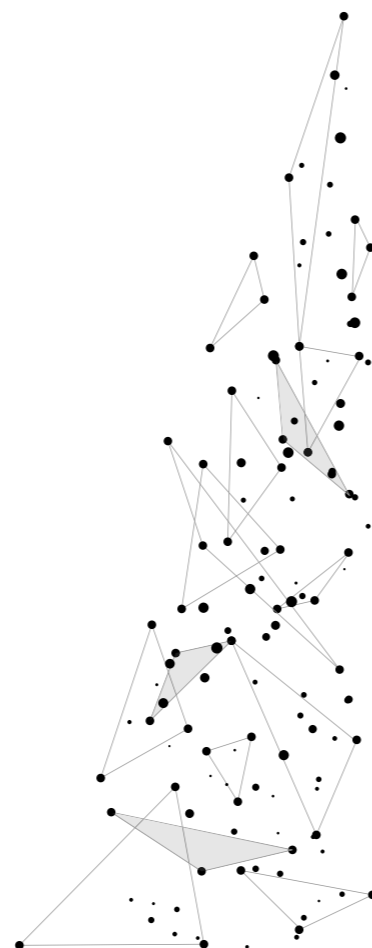
This self-study training course is an introduction to the R³S Modeler environment and is designed to be taken prior to attending the Foundation Course. This training covers all aspects required in building a simple model – from reading data, setting assumptions and writing simple formulas, to accessing the output created from the model, and how to use the R³S add-in for Microsoft® Excel® which can be used to build bespoke output reports.

Pre-requisite

- Using Excel spreadsheets, including entering formulas into cells
- Basic programming language similar to writing formula in VBA

Course content

- Introduction to R³S Modeler and overview of the system
- Using the main components:
 - Reading data
 - Setting assumptions
 - Writing basic code
 - Reporting results
 - Introduction to the use of modules for sharing code between different programs
- Key R³S Modeler concept:
 - The information portfolio.



Life Foundation Course

Duration: 2 days

Type: Standard Teacher-led

Overview

This course provides a firm foundation for modeling in R³S Modeler by covering the main components of the system in detail. Following the course, you will be able to use and develop code in the system for company-specific products. It is essential that delegates complete the Pre-requisite course in their own time before attending the 2-day teacher-led course.

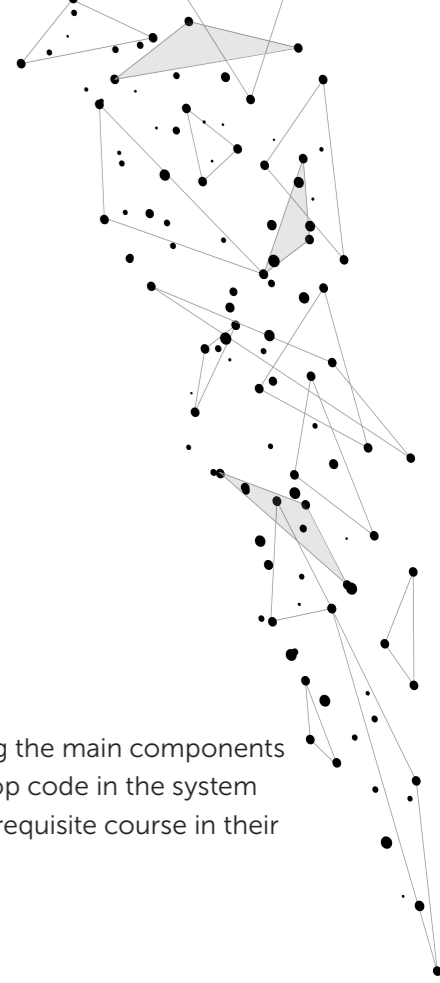
Pre-requisite

- Completed the Pre-requisite course

Course content

- Recap from the Pre-requisite course
- Key usability features:
 - Step variables for projecting variables
 - Rollback variables for calculating the PVFP
 - Sub layers for sub-projections (example of Reserve)
 - Events
- Building new programs from existing modules
- Parent and Child programs
- Error trapping and de-bugging
- Use of the R³S add-in functions for Microsoft® Excel for reporting results

The course is very hands-on, and you will be working in the system throughout the 2 days with expert tuition and assistance from our R³S trainer.



Life Standard Code Course

Duration: 1 day

Type: Standard Self-study or Teacher-led

Overview

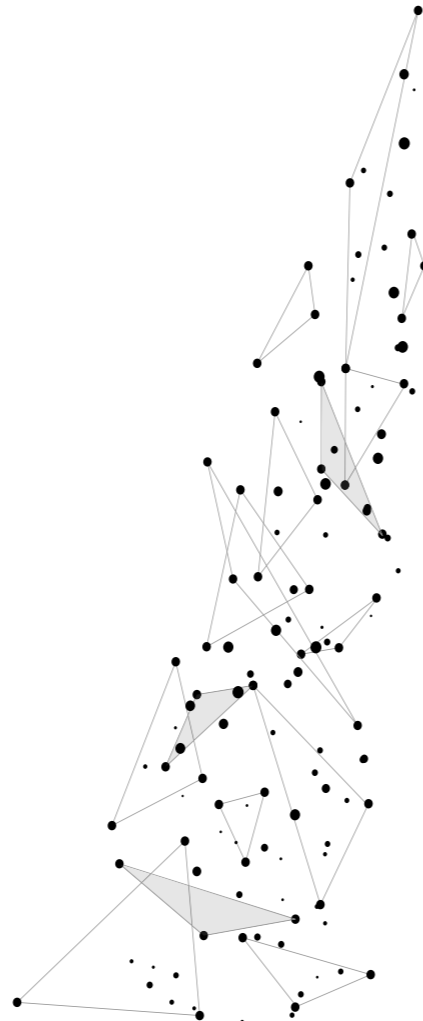
This course takes the assumption that the user is familiar with the components and concepts taught in the Foundation Course. This self-taught training has been designed to provide the user with an introduction on how to use the Standard Code workspace in conjunction with the BB Matrix tool. This course goes through the steps of building a basic model (assets and liabilities) using the Standard Code workspace as a start point for development. This course links directly to the more advanced ALM Course.

Pre-requisite

- Completed the Foundation Course or have a good understanding of modeling with R³S Modeler

Course content

- Introduction to R³S Modeler Standard Code
- Introduction to Initialization modules
- Starting a new implementation project with R³S Modeler
 - Define the structure of the model
 - Identify the required components and modules
- Building two With-Profit liability products using Standard Code (via an Exercise)
- Building Bond, Equity and Cash products using Standard Code (via an Exercise).



The Chartered Institute for Professional Development suggests that just 28% of employees have received training to prepare for role changes due to digitization - which suggests that much of the new power that we have in technology is going to waste.

Life ALM Course

Duration: 2 days

Type: Standard Teacher-led

Overview

This course is for R³S users who have a good understanding of R³S Modeler and are regular users of the system. Delegates will learn how to modify liability and asset child programs built from Standard Code, implement company decisions in a parent program and pass the results back to the child programs.

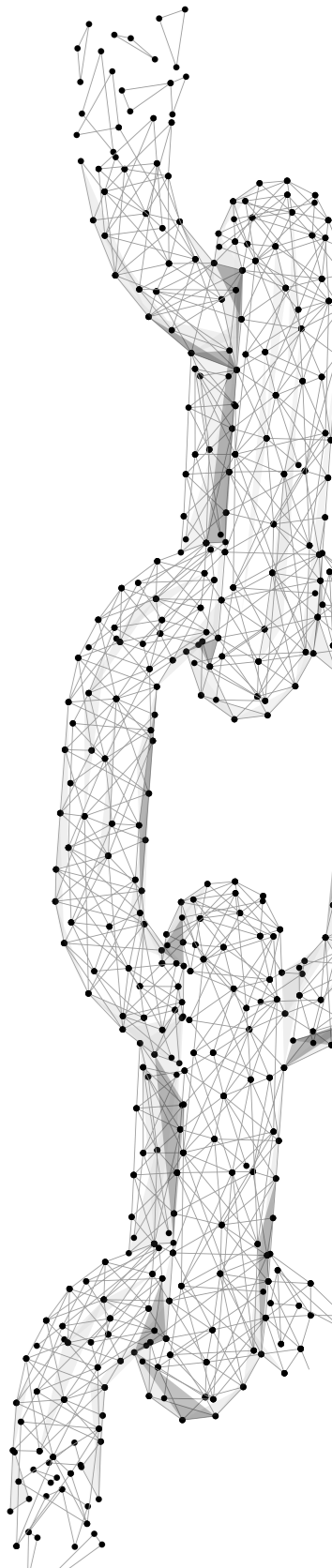
Pre-requisite


- Completed the Foundation Course and Standard Code Course
- Basic knowledge of ALM calculations

Course content

- Overview of dynamic decisions modeling in R³S Modeler
- Consideration of available Standard Code
- Best practice for modifying Standard Code
- Implement bonus declaration and asset rebalancing as company decisions
- Implement company-specific modifications to code
- Implement adjustments to code to use stochastic scenario file rather than scalar deterministic assumptions
- Develop a parent program to summarise liability and asset values from child programs
- Further develop parent program to implement company decisions and feed decisions into child programs

The course is very hands-on, and you will be working in the system throughout the 2 days with expert tuition and assistance from our R³S trainer.





Whether developing and pricing new products for launch or implementing new regulations, building accurate and realistic models as quickly as possible is a common requirement.



Advanced Training Modules

Duration: Average of 2h per module.
All modules do not have the same duration due to the complexity of the topic

Type: All advanced modules are teacher-led

Overview

Our advanced modules focus on specific R³S Modeler functionality and are designed such that they can be added to a standard teacher-led course or selected independently to create a tailored course.

The advanced modules are not required to be taken in the order listed, but there is some overlap of content with a few of the advanced modules. This section details the contents of each advanced module as well as some guidance based on our experience to help you choose the most appropriate modules.

If you require more information or want to discuss your training plans with us, please do not hesitate to contact our team (training@rnaanalytics.com).

Our recommendation

- Complete the Foundation Course prior to attending these modules or have experience modeling in R³S Modeler.
- Ideal for regular users who aim to develop more sophisticated / complex models making the most of R³S Modeler functionalities.

List of Advanced training modules

- External Assumptions, Placeholders & Batch
- Grouping
- New Business
- Projected Data layer
- Targeting
- Pricing
- Looping

From conversations with our clients, we know that insurers want more details on the risks and their impacts on the business.

Module: External Assumptions, Placeholders & Batches

Duration: 2 hrs

Overview

This module will teach delegates how to parameterize R³S models. There are components in R³S Modeler that can be used to amend model parameters without the need of modifying the model itself.

The components covered in this module are external assumptions, run-time parameter sets, model string system variables and batches.

Module content

- Amend assumption sets to read from an external Excel file instead of using internal assumptions
- Using run-time parameter sets to amend model parameters at run time
- Using the batch component in conjunction with the Model_String system variables
- Setting up a Batch model to run the same model using different stress names akin to our Solvency II Standard Code

Our recommendation

- We see this module as the first basics in parameterizing a model as these functionalities would be expected to be used in any R³S model and are widely used in any of our example models.

Module: Grouping

Duration: 1h30

Overview

The Grouping components control how results from calculations are aggregated in subsequent calculations and output. There are two ways of using the Grouping component within R³S Modeler, as a Results Grouping or as a Calculation Grouping.

Users attending this module will learn how to separate aggregated results at the results stage and how to group records when they are passed from a child program to a parent program.

Module content

- Set up a grouping to be used as a result grouping
- Apply a result grouping to a program or layer in a model
- Understand how to use the Excel add-in to display grouped results
- Set up a grouping to be used as a calculation grouping, which enables records to be grouped when they are passed from child programs into a parent program

Our recommendation

- This module is ideal for users who want to learn all the methods of grouping calculations and results together in R³S Modeler.
- This functionality is particularly useful for IFRS 17 and Solvency II Group Aggregation modeling.

Module: New Business

Duration: 1h30

Overview

Modeling New Business (in other words policies which are not in force at the start of the projection) is an important requirement and a common component to consider when modeling Life Insurance products.

Using the same model to value future New Business alongside existing (in force) business avoids the risks inherent in having to maintain separate models and ensures consistency in the valuation of all business. This module teaches delegates how to model new and existing business in the same R³S model, with ease.

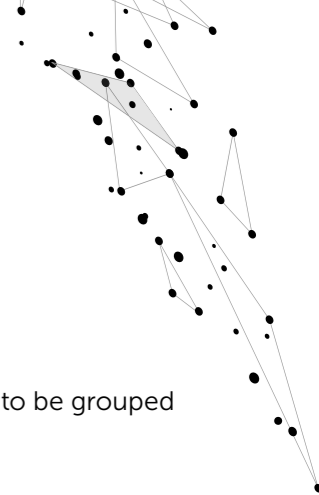
Users attending this module will learn how to include new business policies into an R³S model and the considerations to be made when initializing variables.

Module content

- Understand how New Business policies can be incorporated into a model
- To be aware of the usual need for additional IIP variables for New Business
- To be aware of what may and may not be output for New Business
- How to use Initialization modules in conjunction with New Business policies

Our recommendation

- This module covers Results Groupings and delegates should ensure they are familiar with this functionality or have attended the Grouping Advanced Module prior to attending this module.



Module: Projected Data Layers

Duration: 4h30 (opt. 3h)

Overview

Projected Data Layers allow external cashflows to be read in via an ODBC connection. The Projected Data Layer component allows cashflows that are calculated outside of R³S Modeler, or into a separate R³S model, to be read into an existing R³S model.

This functionality is advantageous for clients who have calculations that are done outside of R³S Modeler (i.e. Excel or another actuarial modeling tool) but would like to consolidate their cashflows in an R³S model and/or increase workflow efficiency when results from an R³S model need to be read as input of another R³S model.

Clients attending this module will learn how to read external aggregate cashflows and how the Projected data component works alongside other components in an existing R³S model.

Module content

- Introduction to the Projected data component
- Learn how to read in external cashflows via the Projected Data Layer
- How to use the Data Layer in conjunction with the Projected Data Layer
- How to read in multiple scenario aggregate record cashflows
- How to read in Grouped Results from an R³S run
- How to read in data into a parent program via a Projected Data Layer and add a switch when the data is passed through and when it isn't.

Our recommendation

- The Grouping functionality is used in this training and delegates should ensure they are familiar with this functionality or have attended the Grouping Advanced Module prior to attending this module.
- This course can be split into two sections. The first section covers the basics of using the Projected Data Layer and the second covers more advanced usage of this component. Delegates have the option to attend the first section only.

Module: Targeting

Duration: 1h30

Overview

The Targeting functionality is a calculation process which automatically searches for the value of a variable based on an input variable. This input variable could be a data or assumption item which then allows a related program variable to attain a specified target.

Targeting is essentially a goal seeking function. Clients who engage in product pricing activities would find this module useful as we cover how to determine a level of premium which can attain a specified profit target for a given record.

Clients attending this module will gain a good understanding of the Targeting functionality.

Module content

- Overview of the Targeting functionality
- How Targeting can be used in R³S Modeler for product pricing

Our recommendation

- This module uses some Runtime parameters functionalities and the user should be familiar with this functionality.

Module: Pricing

Duration: 1h30

Overview

Following on from the Targeting module, users will learn how to use R³S Modeler functions to perform other product Pricing exercises.

Module content

- Calculate the Internal Rate of Return using the IRR and array functions
- Create a Batch model to perform sensitivity testing, applying shocks to realistic assumptions
- Using database views to read values from individual output results from the Targeting model
- Output sensitivity testing results in Excel

Our recommendation

- The content of this module follows on from the Targeting module which must be taken prior to attempting the this module.

Module: Looping

Duration: 3h

Overview

The Looping component is used to iteratively process a set of variables for either a set number of iterations or until a pre-defined condition has been met.

In this module users will learn how to use the Looping component to match cashflows.

Users will create a Cashflow Matching model; this is an Asset Liability Model that calculates the number of bonds for each duration that are required within the model projection to match the expected future liability cashflows of a With-Profit Endowment product.

Users who engage in Asset Liability Modeling type activities will find this module useful and will gain an insight on how to use Looping in conjunction with array functions to create a Cashflow Matching model.

Module content

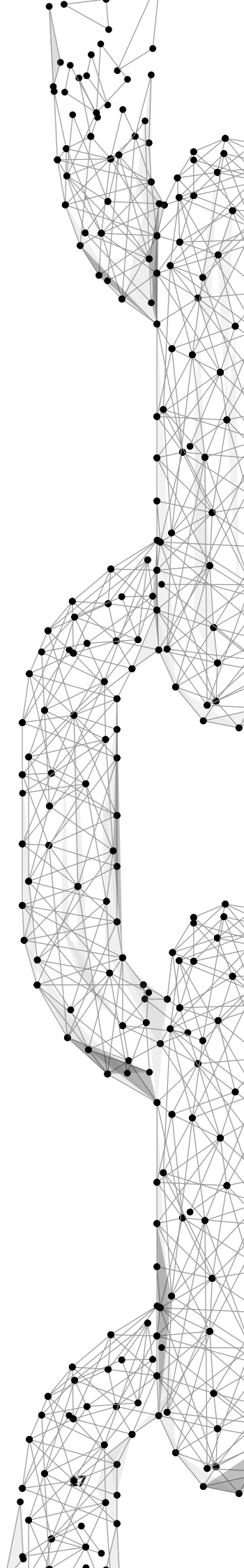
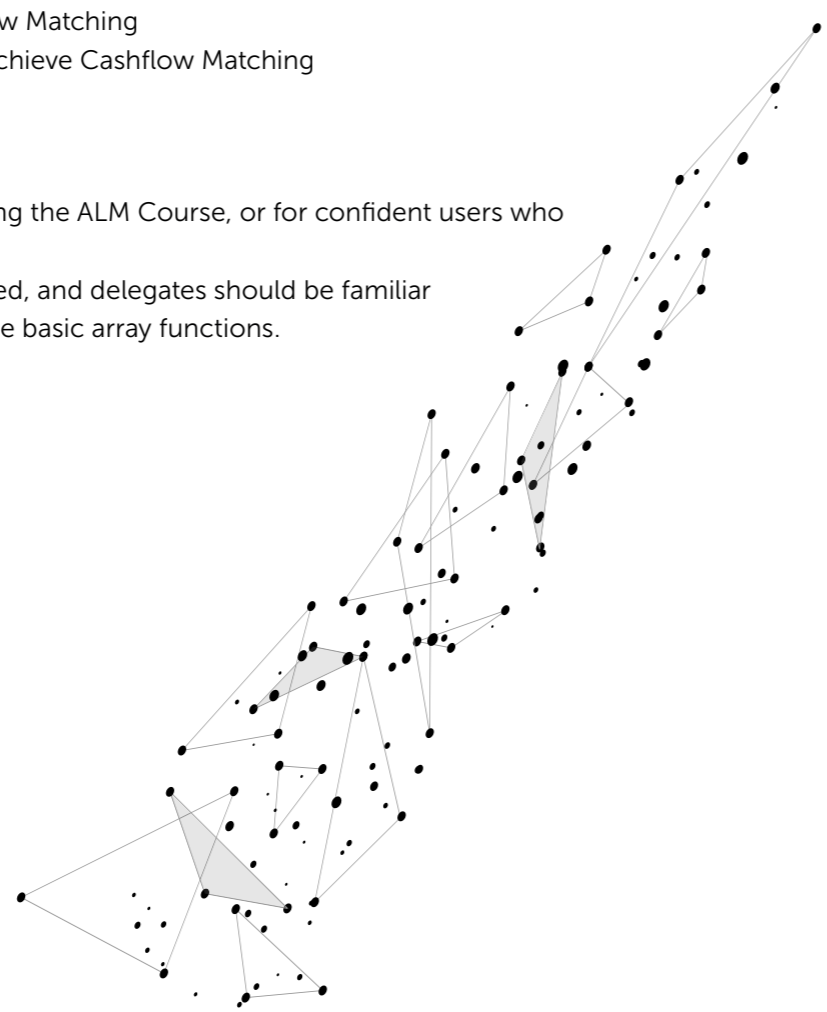
- Overview of the Cashflow Matching process
- Overview of the Looping component
- Using Looping to achieve Cashflow Matching
- Working with Array functions to achieve Cashflow Matching

Our recommendation

- This course is best to take following the ALM Course, or for confident users who have used the system for a while.
- Array functions are extensively used, and delegates should be familiar modeling with arrays and using the basic array functions.

Tell me and I forget, teach me
and I may remember, involve
me and I learn.

Benjamin Franklin



3. Non-Life Modelling

Non-Life Pre-requisite Course

Duration: ½ to 1 day

Type: Standard Self-Study

Overview

This self-study training course is an introduction to the R³S Modeler environment and is designed to be taken prior to attending the Foundation Course. This training covers all aspects required in building a simple model – from reading data, setting assumptions and writing simple formulas, to accessing the output created from the model, and how to use the R³S add-in for Microsoft® Excel® which can be used to build bespoke output reports.

Pre-requisite

- Using Excel spreadsheets, including entering formulas into cells
- Basic programming language similar to writing formula in VBA

Course Content

- Introduction to R³S Modeler and overview of the system.
- Using the main components:
 - Reading data
 - Setting assumptions
 - Coding and running models
 - Reporting results
 - Introduction to the use of modules for sharing code between different products and processes.
- Key R³S Modeler concept:
 - The information portfolio.

Non-Life Foundation Course

Duration: 2 days

Type: Standard Teacher-led

Overview

This course provides a firm foundation for modeling in R³S Modeler by covering the main components of the system in detail. Following the course, you will be able to use and develop code in the system for company-specific products and become familiar with the basic concept of the Non-Life Standard Code.

It is essential that delegates complete the Pre-requisite course in their own time before attending the 2-day teacher-led course.

Pre-requisite

- Completed the Pre-requisite course

Course Content

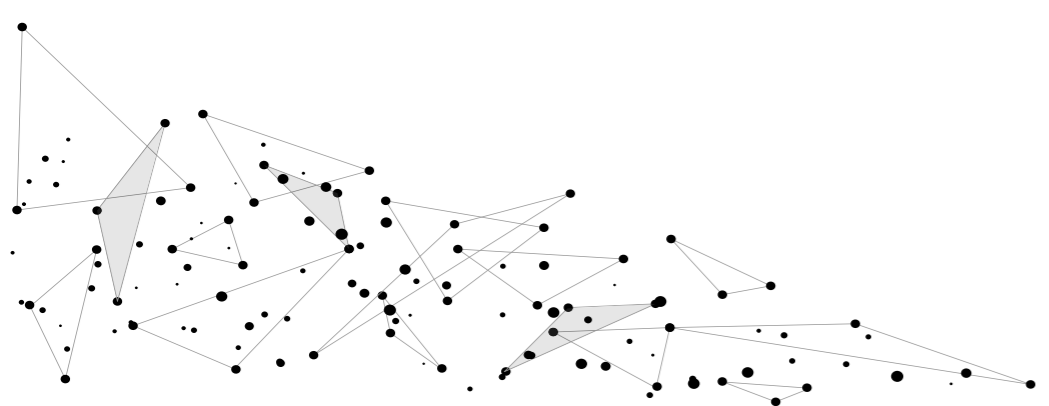
Day 1 - Foundation Course – Liability for Incurred Claims (LIC)

- Recap from the Pre-requisite course & Quiz
- Set up external Assumption tables
- Add Mack method in RunOff_Triangle layer
- Add Bootstrap Parametric layer in NL LIC Model
- Add Bootstrap_ODP layer in NL LIC Model
 - Learn about Looping
- Error trapping
- Build a Microsoft® Excel reporting template for LIC output
 - Use of the R³S Modeler add-in functions for Microsoft® Excel for reporting results.

Day 2 - Foundation Course – Liability for Remaining Coverage (LRC)

- Recap from Day 1
- Add LRC data in NL Data Prep model
- Build NL LRC Fit model
 - Learn about Targeting
- Error trapping
- Build a Microsoft® Excel reporting template for LRC output
 - Use of the R³S Modeler add-in functions for Microsoft® Excel for reporting results.

The course is very hands-on, and you will be working in the system throughout the 2 days with expert tuition and assistance from our R³S Modeler trainer/s.



4. Governance

Development Manager Course

Duration: 3 - 4h

Type: Standard Teacher-led

Overview

This course gives an overview on R³S Development Manager and teaches users how to use this feature to build an actuarial model. Delegates will work together in the same environment to complete a model, partially built from our Standard Code library. The focus of this course is on user collaboration.

Pre-requisite

- Completed Foundation Course

Course Content

- Understand how Development Manager works using both R³S Modeler and R³S Manager
- Understand how to navigate within R³S Manager
- How to create Libraries and Branches
- How to create Sandboxes
- How to check out/in components
- How to create Snapshots

The course is very hands-on, and you will be working in the system throughout the session with expert tuition and assistance from a R³S trainer.

Process Manager Course

Duration: 3 - 4h

Type: Standard Teacher-led

Overview

This course gives an overview on R³S Process Manager and teaches users how to upload data, assumptions and run R³S models in Process Manager.

Course Content

- Understand how Process Manager works using both R³S Modeler and R³S Manager
- How to navigate within R³S Manager
- Create Structures
- Create Instances
- Create Reporting Periods
- Create Reporting Period Templates
- Create Approvals
- Connection Strings

The course will go through R³S Process Manager in detail with expert tuition and assistance from a R³S trainer and contains an exercise users will undertake to execute models in Process Manager.



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