Course Purpose:
This course introduces the user of Spotfire to TIBCO Enterprise Runtime for R (TERR) and shows how scripts written in the R language can be used to extend Spotfire’s capabilities.

Prerequisite(s):
- SP121 Spotfire Analyst Essentials I
- SP131 Spotfire Analyst Essentials II
- SP141 Spotfire Analyst Advanced Calculations

Intended audience:
- Power users and data scientists who want to use R scripts in Spotfire to extend their analyses with data manipulation and data analysis tasks powered by TIBCO Enterprise Runtime for R (TERR)

Delivery options:
- Mentored online training – the most flexible mechanism for obtaining Spotfire training
- Instructor-led classroom training – the traditional classroom training approach

Course overview:
Spotfire Analyst includes TIBCO Enterprise Runtime for R (TERR). TERR gives you the power to extend Spotfire’s capabilities by using R scripts to perform data manipulation and data analysis tasks in Spotfire analyses. This course includes examples representing some of the most common applications of R scripting in Spotfire. The course also enables you with the general skills and knowledge required to apply your own R scripts in Spotfire. Spotfire version 6.5 or higher is required.

This course does not include R language instruction. R language training is widely available from other sources, and a reference guide is included listing recommended resources for learning the R language. Training and experience coding in the R language is recommended, but not required, before you take this course.

Course details:
Online materials include more than 40 lessons and demonstrations comprising over 8 hours of video, hands-on examples, and a forum to submit questions.

SIGN-UP/REGISTER for course SP144 Spotfire Analyst Extended with R / TERR

SECTIONS / Modules:

INTRODUCTION TO R AND TERR
- What is R? Why use R?
- What is TERR? Why use TERR?
- Differences between TERR and open source R
- Learning the R language

OVERVIEW OF TERR IN SPOTFIRE
- Reasons for using TERR and Spotfire together
- User roles for working with TERR and Spotfire
- Ways to use TERR in Spotfire
- TERR expression functions
- TERR data functions
- Using TERR in the different Spotfire clients

ARCHITECTURE FOR TERR AND SPOTFIRE
- TERR embedded in Spotfire Analyst and Spotfire Desktop
- TIBCO Spotfire Statistics Services
- Publishing analyses with TERR functions on Spotfire Web Player

SETTING UP YOUR TERR-SPOTFIRE ENVIRONMENT
- Using the TERR console
- Using TERR with RStudio
- Installing packages from CRAN on TERR
- Accessing TERR documentation and R package documentation
- Installing open source R (optional)

TERR EXPRESSION FUNCTIONS
- Using in-line TERR expressions
- Registering and using TERR expression functions
- TERR expression function inputs
- TERR expression function outputs
- How TERR expression functions respond to filtering
- Using TERR expression functions with trellised visualizations
- TERR expressions warnings and errors
  - Example: K-means clustering
  - Example: LOWESS smoothing
  - Example: Regression lines with confidence bands

TERR DATA FUNCTIONS
- Creating TERR data functions
- Running TERR data functions
- Modifying TERR data functions
- Data function input parameters
- Data function output parameters
- Data functions progress, warnings, and errors
- Troubleshooting TERR data functions
- Other ways to insert data functions
- Refreshing data functions with action controls
  - Example: K-means clustering
  - Example: Regression modeling
  - Example: Classification modeling