[A-3]COURSE SYLLABUS

1. Course Description (Approximately 100 words)

This course is technical in nature. It makes use of coding in R and covers the application of machine learning in business. Some algebraic and calculus knowledge is strongly advised, but is not required. Tertiary level statistics and knowledge of a functional or object oriented language is advantageous. HTML is not considered a programming language in this context. No specific software is required for this online certificate course.

2. Course Goals and Objectives (Approximately 100 words)

On completion of this course, students will be able to:
-An in-depth understanding of various machine learning techniques, including regression, ensemble learning, and tree-based methods, among others.
-The ability to code in R and apply machine learning techniques to various types of data.
-Exposure to the latest frontiers of machine learning, such as neural networks and how these can be applied in business.

3. Textbook (Title, Author, Publisher, Year of Publication, etc.)

The 7 Habits of Highly Effective People: Powerful Lessons in Personal Change by Stephen R. Covey (Author)

4. Reference

Never Split the Difference: Negotiating as if Your Life Depended on It by Chris Voss (Author), Michael Kramer (Narrator), HarperAudio (Publisher)

5. Course Requirements and Grades

Coursework (30% weighting):

There is one item of coursework for this module which contributes to the final assessment mark forthis module:
Coursework: a written essay of a maximum of 2,000 or 2,500 words (deadline – weeks 9-12)
The coursework is designed to check student progress, extend and reinforce concepts covered and also test individual performance.
Examination (70% weighting):

The final piece of assessment will be an unseen written examination of 2 hours ' duration.

6. Course Calendar

Week	Main Content
1	Learning from data
2	Principles of machine learning
3	Regression
4	Variable selection and shrinkage methods
5	Classification
6	Tree-based methods and ensemble learning
7	Introduction to neural networks
8	Unsupervised learning
9	Action Learning Seminar on Analytics
10	Machine Learning
11	Digital Economy
12	Artificial Intelligence
13	Machine learning techniques
14	Code in R