

# Certificate in Data Science (Analytics and Algorithms) for Insurance & Financial Services

## What is this course about?

Developed in conjunction with the Insurtech Network Centre (INC) at IT Carlow this innovative course is in one of a suite of courses designed in response to increasing industry demand for professionals with Data Science domain knowledge. The overarching objective is to assess and critique how advanced Data Science / Analytics techniques could be applied to areas of the Insurance / Financial Services business.

This course will introduce the student to the concepts of data science (including analytics and algorithms), the data and data science industry and its role in the Irish economy and the roles of the parties involved. The primary working principles of data science (including analytics and algorithms) and how they are applied will also be addressed.

Students will also cover the ongoing evolutions in data science and the tasks involved and be enabled to translate and present the output of statistical models/data analytics and algorithms projects to relevant business problems.(i.e. pricing) or the technical reserve of an Insurance portfolio (i.e. reserving).

## What subjects will I study?

Data Pre-processing | Data Analysis Techniques and Algorithms | Data Post-processing

## How is it delivered

Lectures and tutorials are provided

## On Completion of the Programme, Learners should be able to

- Comprehend and analyse the primary concepts and nuances of the data science discipline;
- Demonstrate an understanding of the challenges, opportunities and issues arising from the use of data science in the Insurance and Financial Services business;
- Evaluate, select and apply the tools and techniques necessary for the effective application of data science in Insurance and Financial Services;
- Critically analyse the impact of existing and emerging data science tools and techniques to problems in the Insurance and Financial Services domain;
- Evaluate the effectiveness of applied data science in relation to the challenges /issues/opportunities to be addressed in the Insurance and Financial Services industries.

## How will I be assessed?

The assessment will be a practical work based continuous assessment which will involve group and individual assignments

## What does it cost?

**€195 in total** reduced from €390 due to funding support received from **Wexford Chamber Skillnet**.

## What Progression Routes are available?

Students will receive with a stand-alone Certificate in Data Science Statistics for Insurance & Financial Services Level 8 (10 credits) or they can progress to the related Certificates in this field or one of the other Higher Diploma or Degrees on offer or the MSc in Data Science

## Duration

1 evening per week  
7.00 - 10.00pm  
for 13 weeks or 5 days  
(Indicative)

## Commencing

Quarter 4 2020

## Where

Blended Learning

## Award

Level 8 (10 Credits)  
Certificate

