



# Madras School of Economics

Post Graduate Teaching & Research in Economics & Finance

## Certificate Program in Data Science and Financial Engineering

**(September-November 2018)**

### **Syllabus and Curriculum**

This 3 month course is a part of a 11 month PGD Program in Data Science and Financial Engineering started in February 2018. It is a part time program offered during weekend (Saturday and Sunday). It provides a rigorous **hands-on training** in analyzing large amounts of data and formulating sophisticated analytical models. The uniquely designed program starts from the basics, and culminates in cutting edge material and concepts. Experts from industry and research labs further enrich the participants understanding by exposing them to state of the art topics. This will surely enhance the participants skills in data science and financial engineering, which are a must for future research and employment.

In this program, 4 topics will be taught with rigorous practical applications on computers. As it is a part time diploma program, for each subject the concerned teacher will decide evaluation strategy (mostly projects, seminars, assignments). Learning is the main objective and this course is not based on exam evaluation system. After successful completion, MSE will provide course completion certificate.

#### **Contents (Topics to be covered)**

- 1. Advanced Decision Science Analytics**
- 2. Financial Time Series Econometrics**
- 3. Risk Analytics and FIS**
- 4. Machine & Deep Learning**

How to Apply: Please send your application letter stating the topics to be learned with a brief details about the qualification and contact address with mobile and email id to shanmugam@mse.ac.in on or before September 7, 2018.

Fees: For full course (for all 4 topics) the fees is Rs. 1 lakh. For 1 topic the fees is Rs. 25,000. Based on the number of topics, the fees should be paid through online or thorough a DD in favour of Madras School of Economics. The details of online payment mode is given below:

NEFT

Beneficiary Name: MADRAS SCHOOL OF ECONOMICS

Bank Name & Branch: Indian Overseas Bank, Gandhi Nagar-Chennai.

Bank Account Number: 163501000002345

IFSC Code: IOB0001635

MICR Code: 600020120

While making the online fund transfer, please mention <your name> (e.g. Ram Kumar) in the transaction remarks field. After making the online fund transfer please mail scanned/printout of the payment details on or before the deadline to [shanmugam@mse.ac.in](mailto:shanmugam@mse.ac.in)

## Time Table

**Venue: Cognizant Lab, Second Floor, COE Buidling**

<b>Day/Timing</b>	<b>Day 1</b>	<b>Day 2</b>
9.30 a.m - 1.00 p.m	<b>Advanced Decision Science Analytics (Dr. Saumitra)</b>	<b>Risk Analytics and FIS (DR. Tholkappian)</b>
2.00 p.m - 5.30 pm	<b>Machine &amp; Deep Learning (Dr. Rakesh)</b>	<b>Financial Time Series Econometrics (Dr. Shanmugam)</b>

**Classes will start from September 8, 2018.**