

INTERNATIONAL MANAGEMENT INSTITUTE, BHUBANESWAR

Post Graduate Diploma in Management (PGDM)

FINANCIAL & RISK ANALYTICS (FN635)

CREDIT: 1.5 credits

SESSION DURATION: 60 Minutes

TERM: VI
YEAR: 2017-2019
BATCH: I

Faculty: Dr. Sushil Kalyani and Dr. Santanu Das

Telephone: 0674-3042149

Office hours: 9:30 AM to 5:30 PM

Consulting hours: 4 PM to 5: 30 PM

Course Introduction: Data analytics has become the need of hour for the students in almost every field of study. Availability of high quality data and that too in large number requires processing which will help the organizations to make suitable decisions much faster. Advanced tools like value at risk analysis, default prediction tools etc. are available and this course is designed to cater to the current industry requirements.

Course Objectives: The basic objective of this course is to expose the students to various risk analytics tools as used in finance. The course requires students to have prior knowledge of basic statistical methods.

Course Pedagogy: This course is predominantly lab based and will make use of SPSS and R to do predictive modeling. Regular assignments will also be given to the students to test their understanding apart from other evaluation criteria.

Learning Objectives:

1. Students will learn about using decision making tools
2. To impart training with data for default prediction
3. To forecast seasonality of data
4. To model volatility of time series data

Readings:

1. Financial Time Series Analysis – Ruey Tsay (Wiley)
2. Business Forecasting – Hanke and Wichern (Pearson)

Evaluation:

Assignment (S. Das)	30%
Quiz	10%
Project:	20%
End Term	40%

Session Plan

Session No.	Topic	Learning Outcomes	Readings/ Cases
1-2	Risk Analysis using Decision Tree	LO1	
3-4	Predicting Company's Performance by using Discriminant Analysis	LO1, LO2	
5	Discriminant Analysis of Default Risk	LO2	
6	Model to Predict Probability of Default (PD)	LO1, LO2	
7	Understanding and setting up LGD, EAD Models	LO1, LO2	
8	Predictive analysis using SPSS	LO1, LO2	
9-11	Volatility Modelling – Symmetric and Asymmetric	LO4	Tsay, Ch5 Assignment: Chose any two companies (1 from India and 1 from US). Download their intraday prices for the last 5 years and fit GARCH and GJR-GARCH models. Identify if these companies show any leverage effect or not. Data source: Bloomberg
12-13	Value at Risk Modelling	LO4	Tsay, Ch 8
14-15	ARMA models and forecasting	LO3	Hanke and Wichern, Ch 5