MT-527	Financial Modelling and Risk Management
	Financial Modelling Methodology and Applications: Substantive and empirical modelling approaches. Statistical trading strategies and their evaluation, Nonparametric regression, Advanced time series modelling and forecasting, Options and interest rate markets, Credit markets and default risk modelling. Risk Management: Banking and bank regulation, Market risk and credit risk, Asset and liability management, Logistic regression, Generalised linear models and mixed models. Censored data and survival analysis, Loan prepayment and default as competing risks, Back testing. Stress testing and Monte Carlo methods: Monte Carlo simulation, Portfolios containing options, Stress testing a trading portfolio using simulation methods Risk surveillance, early warning and adaptive risk control methodologies: Performance-oriented design, Active and passive performance monitoring, Performance metrics and measurements, Measurement-based performance evaluation in internet, System measurement and monitoring, Performance model verification and validation. Reference Books: 1. Chan N.H and Wong H.Y, *Simulation Techniques In Financial Risk Management,* John Wiley & Sons, Inc. Publication, 2006. 2. Christoffersen P.F, *Elements of Financial Risk Management,* Academic Press, 2003. 3. Horcher K.A, *Essentials of Financial Risk Management,* John Wiley & Sons, Inc. Publication, 2005. 4. Haslett W.V, *Risk Management: Foundations for a Changing Financial World,* John Wiley & Sons, Inc. Publication, 2010.