《金融时间序列分析方法与技术》课程中英文简介

Financial Time Series Analysis Method and Techniques

课程代码：2121513B **Course Code：**2121513B

课程名称：金融时间序列分析方法与技术 **Course Name：**Financial Time Series Analysis Method and Techniques

学时：48 **Periods：**48

学分：3 **Credits：**3

考核方式：考查 **Assessment：**Assignment

先修课程：高等数学、微积分 **Preparatory Courses：**Higher Mathematics,

Calculus

《金融时间序列分析方法与技术》是为信息管理与信息系统专业本科生而开设的课程。通过本门课程的教学，使学生掌握处理金融领域时间序列数据的建模能力；了解时间序列理论的基本方法；探索利用时间序列模型对实际问题进行建模分析。教学过程中，配合Python开源软件提升学生的动手实践能力，为学生进一步学习金融大数据分析奠定基础。

本课程主要介绍金融时间序列理论在信息管理与信息系统专业领域中的应用以及相关建模方法。简单介绍了金融时间序列的相关背景知识、基本性质；重点介绍了自回归模型，移动平均模型、ARMA模型、指数平滑模型、季节模型、带时间序列误差的回归模型以及长记忆模型。而且，通过开源的Python编程语言将上述模型应用于具体实践，旨在提高本科生的建模能力。

Financial Time Series Analysis Method and Techniques is a course for undergraduates majoring in information management and information system. Through the teaching of this course, students can master the modeling ability of processing time series data in the financial field, understand the basic methods of time series theory, and explore the use of time series model to model and analyze practical problems. In the teaching process, with Python programing language to improve students' practical ability, lay the foundation for students to further learn financial big data analysis

This course mainly introduces the application of financial time series theory in the field of information management and information systems, and related modeling methods. It briefly introduces financial time series, basic property, and its applications. It introduces mainstream modeling methods, including auto regression model, moving average model, ARMA model, Exponential smoothing model, Seasonal model, Regression model with time series error model and LSTM model. In addition, the open source modeling tool Python, integrated modeling tool are applied the above models to specific practices, aiming to improve the capabilities.