

## 课程详述

### COURSE SPECIFICATION

以下课程信息可能根据实际授课需要或在课程检讨之后产生变动。如对课程有任何疑问，请联系授课教师。

The course information as follows may be subject to change, either during the session because of unforeseen circumstances, or following review of the course at the end of the session. Queries about the course should be directed to the course instructor.

1.	课程名称 <b>Course Title</b>	从技术到企业-技术创新、金融市场与公司发展 From technology to business - technology innovation, financial markets and company development				
2.	授课院系 <b>Originating Department</b>	金融系 Department of Finance				
3.	课程编号 <b>Course Code</b>	FETS101				
4.	课程学分 <b>Credit Value</b>	1				
5.	课程类别 <b>Course Type</b>	专业选修课 Major Elective Courses				
6.	授课学期 <b>Semester</b>	夏季 Summer				
7.	授课语言 <b>Teaching Language</b>	中英双语 English & Chinese				
8.	授课教师、所属学系、联系方式（如属团队授课，请列明其他授课教师） <b>Instructor(s), Affiliation &amp; Contact</b> (For team teaching, please list all instructors)	Jerry Yang 杨旭宁 Email: yangxn@sustc.edu.cn Office: Huiyuan 3-325#				
9.	实验员/助教、所属学系、联系方式 <b>Tutor/TA(s), Contact</b>	待公布 To be announced				
10.	选课人数限额(可不填) <b>Maximum Enrolment (Optional)</b>					
11.	授课方式 <b>Delivery Method</b>	讲授 <b>Lectures</b>	习题/辅导/讨论 <b>Tutorials</b>	实验/实习 <b>Lab/Practical</b>	其它(请具体注明) <b>Other (Please specify)</b>	总学时 <b>Total</b>
	学时数 <b>Credit Hours</b>	14			2 (讲座)	16

12. 先修课程、其它学习要求 <b>Pre-requisites or Other Academic Requirements</b>	FIN206 公司金融 Corporate Finance
13. 后续课程、其它学习规划 <b>Courses for which this course is a pre-requisite</b>	
14. 其它要求修读本课程的学系 <b>Cross-listing Dept.</b>	

### 教学大纲及教学日历 SYLLABUS

#### 15. 教学目标 Course Objectives

本课程旨在通过对技术创新企业整个生命周期的不同阶段，从技术到产品，从产品到市场，从市场到管理，从管理到持续技术创新的良好生态系统建设，不同阶段 VC、PE 和银行等金融机构合作方式的分析，找寻技术到企业的符合我国国情的一般发展规律，让学生建立一般性的认知，为进一步学习与未来的工作发展提供新的认知视角，并能够针对技术创新企业做出一般性的分析与建议。

This course aims to find out the general development rules from technology to enterprise, through the analysis of the different stages of the whole life cycle of technology innovation enterprises (from technology to products, from products to markets, from market to management, from management to sustainable ecosystem innovation) and the cooperation with VC, PE and banks at different stages, so that students can establish a general cognition. It provides students a new cognitive perspective for further learning and future work development, and help students make general analysis and recommendations for technology innovation companies.

#### 16. 预达学习成果 Learning Outcomes

本课程为前沿性探索课程，目前没有完整统一的理论框架。学习完之后，学生应该了解技术创新企业与成熟企业、其他创新类企业的不同，技术创新企业在不同发展阶段的需求，资本市场的作用，我国技术创新企业发展路径与国外的异同，并能够对技术创新企业不同阶段的发展有清晰的分析框架，做出简单的分析。

This course is a cutting-edge exploration course and there is currently no complete theoretical framework. After the study, students should understand the difference between technological innovation enterprises and mature enterprises, other innovative enterprises, the needs of technological innovation enterprises at different stages of development, the role of capital markets, the similarities and differences of the development path between China's technological innovation enterprises and those of foreign countries. Students will be able to have a clear analytical framework for the development of different stages of technological innovation and make simple analysis.

#### 17. 课程内容及教学日历（如授课语言以英文为主，则课程内容介绍可以用英文；如团队教学或模块教学，教学日历须注明主讲人）

**Course Contents (in Parts/Chapters/Sections/Weeks. Please notify name of instructor for course section(s), if this is a team teaching or module course.)**

##### 第一讲 技术创新企业的特点（2 学时）

本讲主要介绍国家对科技创新企业的定义，分析理解技术创新与模式创新的异同。结合科创板的推出，从科创板的各项规章制度认识科创板对上市企业的标准要求，并从该角度分析科创板与中小板、创业板、主板的区别。最后参考美国纳斯达克的发展经验，探究纳斯达克成功的原因，从而对中国科创板的未来发展作出一定判断。

##### Lecture 1 Characteristics of Technological Innovation Enterprises

This lecture mainly introduces the definition of science and technology innovation enterprises, analyzes and understands the similarities and differences between technological innovation and model innovation. In combination with the launch of

the science and technology innovation board, we understand the standard requirements of the board of the company from the various rules and regulations of the science and technology board, and analyze the difference between the science and technology board and the small and medium board, the growth board and the main board. Finally, with reference to the development experience of NASDAQ in the United States, we will explore the reasons for Nasdaq's success and make certain judgments on the future development of the science and technology innovation board.

### 第二讲 公司金融理论在技术创新企业生命周期不同阶段的应用（2 学时）

本讲主要研究公司金融理论在企业成长过程中发挥的作用，尤其是资本市场的作用，这其中的问题主要包括经营风险与融资、公司股权结构的确定、资本结构的确定、融资的时点选择、资金在发展过程中的重要次序、技术创新创业团队分析、并购或 IPO 的时点选择、依靠财务指标还是技术指标判断公司发展程度等等，以华为的成长之路作为案例进行分析。

#### Lecture 2 The Application of Corporate Finance Theory in Different Stages of The Life Cycle of Technological Innovation Enterprises

This lecture mainly studies the role of corporate finance theory in the process of corporate growth, especially the role of the capital market. The main problems include operational risk and financing, determination of the company's shareholding structure, determination of capital structure, and timing of financing, the important order of funds in the development process, the analysis of technology innovation and entrepreneurship team, the choice of M&A or IPO, the financial indicators or technical indicators to judge the degree of development of the company, etc. Take Huawei's growth path as a case analysis.

### 第三讲 从技术到产品-VC、PE 的作用（2 学时）

本讲主要研究技术创新企业的初始阶段的发展，即技术到产品的发展过程，这其中的主要问题包括公司发展该由科技人员主导还是金融投资机构主导、融资方式的选择、融资对象的选择、融资细则的制定（例如是否要求业绩对赌，通过债权还是股权）、股权结构的安排、管理层的激励制度、技术持股的比例选择等。

#### Lecture 3 From Technology to Product - The Role Of VC and PE

This lecture mainly studies the development of the initial stage of technological innovation enterprises, that is, the development process of technology to products. The main problems include the role of financial investment institutions in the development of enterprises, the choice of financing methods, the choice of financing targets, and the formulation of financing rules. (For example, whether to require performance against gambling, through debt or equity). The problems also include arrangement of shareholding structure, management incentive system, and proportion of technology holdings.

### 第四讲 从产品到市场-VC、PE、银行与保险公司的作用（2 学时）

本讲主要研究技术创新企业的成长阶段的发展，即推出产品到抢占市场的发展过程，这其中的主要问题包括目标市场的选择、VC 和 PE 的角色与作用、不同轮次的融资安排、不同阶段的股权结构安排、新阶段内管理层的激励制度、吸引银行的介入时点等问题。

#### Lecture 4 From Product to Market - The Role Of VC, PE, Banking and Insurance Companies

This lecture focuses on the development of the growth stage of technological innovation enterprises, that is, the development process of launching products to seize the market. The main problems include the choice of target market, the role of VC and PE, financing arrangements of different rounds, the structure of the shareholding structure at different stages, the incentive system of the management in the new stage, and the time of attraction of the bank.

### 第五讲 从市场到创业中的风险管理（2 学时）

本讲主要探讨生命周期不同阶段内的管理的特点与作用，这其中主要包括营运与战略管理、金融机构在各阶段管理中的角色、VC 和 PE 等金融机构的退出。结合企业生命周期中不同阶段的风险特点，深入认知金融机构与金融市场在风险管理中

的作用，熟悉风险管理工具选择与使用，了解政府在企业发展过程中扮演的角色。

#### Lecture 5 Risk Management from Market to Entrepreneurship

This lecture focuses on the characteristics and roles of management in different stages of the life cycle, including operational and strategic management, the role of financial institutions in all phases of management, and the exit of financial institutions such as VCs and PEs. Combine the risk characteristics of different stages in the life cycle of the enterprise, deeply understand the role of financial institutions and financial markets in risk management, familiarize with the selection and use of risk management tools, and understand the role of government in the process of enterprise development.

#### 第六讲 成功投资与管理分享-信熹资本（2学时）

在本讲将邀请上海信熹资本资产管理有限公司董事长兰有金分享他在科技创新企业投资与管理领域内的经历及个人感悟，帮助同学们真切地了解到行业的实际发展状况。

#### Lecture 6 Successful Investment and Management Sharing - Sincere Capital

In this lecture, Lan Youjin, Chairman of Shanghai Sincere Capital Asset Management Co., Ltd. will be invited to share his experiences and personal insights in the field of investment and management of science and technology innovation enterprises, helping students to truly understand the actual development of the industry.

#### 第七讲 建立科技创新生态系统（2学时）

本讲主要探讨科技创新生态的定义，研究企业应如何实现科技创新的良性循环，推动技术不断进步，实现技术创新的传承，在市场竞争与技术竞争占据长期优势，维持科技创新生态系统的持久性。

#### Lecture 7 Establishing an Ecosystem of Scientific and Technological Innovation

This lecture mainly discusses the definition of science and technology innovation ecology, studies how the enterprise should achieve a virtuous cycle of technological innovation, promotes technological advancement, realizes the inheritance of technological innovation to have long-term advantages in market competition and technological competition, and maintains the persistence of the scientific and technological innovation ecosystem.

#### 第八讲 案例分析：君实生物、烟台睿创、英伟达、龙芯（2学时）

本讲以案例分析的形式进行。课程将以君实生物、烟台睿创、英伟达为成功案例，以龙芯作为失败案例，对比分析金融机构在科技创新企业生命周期的不同阶段发挥的作用，从实际案例中体会在技术创新到企业发展之路中金融的重要作用。

#### Lecture 8 Case Study: TopAlliance Biosciences Inc., Yantai Raytron Technology, NVIDIA and Loongson

This lecture is conducted in the form of a case study. The course will take TopAlliance Biosciences Inc., Yantai Raytron Technology and NVIDIA as success stories, and use the Loongson as a failure case to compare and analyze the role of financial institutions in different stages of the life cycle of the science and technology innovation enterprises. From practical cases, experience the important role of finance in the development of the science and technology innovation enterprises.

### 18. 教材及其它参考资料 Textbook and Supplementary Readings

让·梯若尔，2007，《公司金融理论》(上下册)，中国人民大学出版社，中译本

### 课程评估 ASSESSMENT

19. 评估形式                      评估时间                      占考试总成绩百分比    违纪处罚                      备注

Type of Assessment	Time	% of final score	Penalty	Notes
出勤 Attendance				
课堂表现 Class Performance				
小测验 Quiz				
课程项目 Projects				
平时作业 Assignments				
期中考试 Mid-Term Test				
期末考试 Final Exam				
期末报告 Final Presentation				
其它（可根据需要改写以上评估方式） Others (The above may be modified as necessary)		100		小组报告 Group Report

20. 记分方式 GRADING SYSTEM

- A. 十三级等级制 Letter Grading  
 B. 二级记分制（通过/不通过） Pass/Fail Grading

课程审批 REVIEW AND APPROVAL

21. 本课程设置已经过以下责任人/委员会审议通过  
This Course has been approved by the following person or committee of authority