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 Course Title**	科技与社会研究（STS）导论 An Introduction to Science and Technology Studies
2.	**授课院系** **Originating Department**	社会科学中心 Center for Social Sciences
3.	**课程编号** **Course Code**	SS102
4.	**课程学分 Credit Value**	2
5.	**课程类别** **Course Type**	通识选修课程 General Education (GE) Elective Courses
6.	**授课学期** **Semester**	春季 Spring
7.	**授课语言** **Teaching Language**	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）** **Instructor(s), Affiliation& Contact** **（For team teaching, please list all instructors）**	徐秋石 XU Qiushi 南方科技大学人文社会科学荣誉学会 Society of Fellows in the Liberal Arts,SUSTech e-mail：qiushi.xu@hotmail.com
9.	**实验员/助教、所属学系、联系方式** **Tutor/TA(s), Contact**	无 NA
10.	**选课人数限额(可不填)** **Maximum Enrolment（Optional）**	

11. 授课方式 Delivery Method	讲授 Lectures	习题/辅导/讨论 Tutorials	实验/实习 Lab/Practical	其它(请具体注明) Other（Please specify）	总学时 Total
学时数 Credit Hours	32				32

12. 先修课程、其它学习要求 Pre-requisites or Other Academic Requirements	无 NA
13. 后续课程、其它学习规划 Courses for which this course is a pre-requisite	无 NA
14. 其它要求修读本课程的学系 Cross-listing Dept.	无 NA

教学大纲及教学日历 SYLLABUS

15. 教学目标 Course Objectives

本课程旨在向学生介绍 STS 领域的核心观点和理念。STS 是连接科学和人文的交叉学科。从“科学、技术与社会”到“科学技术元勘”，STS 究竟是什么？通过 STS，如何理解科学和技术？如何理解科学、技术与社会和文化的相互交织、纠缠和联结？本课程为学生批判性地思考科学和技术作为一种社会活动，思考作为一个技术社会的公民意味着什么提供理论和方法。这门课为科学和工程领域的学生提供一个机会去批判性地反思他们自己对科学和技术的参与，并考虑他们的工作可能会对社会产生的直接和间接的影响。同时也让人文和社会科学背景的学生对科学和技术在世界上的角色有一个反思性的理解。

本课程从梳理和分析 STS 的思想资源入手，在理解知识社会学和默顿学派的传统科学社会学的基础之上，深入到科学知识社会学（SSK）的理论和研究之中去考察什么是科学，而后进入到技术元勘（Technology Studies）的研究之中去考察什么是技术，并涉及 STS 转向声音研究、性别与 STS 等前沿话题。从经典到前沿，本课程勾勒出一幅对于科学和技术的社会和文化研究的图景。我们生活在一个以科学和技术为主导的社会之中，STS 试图打开科学和技术的黑箱，为理解和反思以科学和技术为意识形态的物质世界及其社会生活提供理论和方法。本课程在教授 STS 领域的具体理论和研究方法之外，强调将 STS 作为一种思考世界的方式和研究世界的方法。

This course introduces students to some of the central ideas in the field of STS. From “Science, Technology and Society” to “Science and Technology Studies”, how to understand STS? Through the perspective of STS, how to understand science? How to understand technology? How to understand the entanglements and co-construction between science, technology, society and culture? This course provides students theories and methods to think more critically about science and technology as social activities and what it means to be a citizen in a technological society. It gives students in science and engineering a chance to reflect critically upon their own involvement in science and technology and consider the impact and implications of their work for society. It allows students with backgrounds in the humanities and social sciences to develop a critical understanding of the role of science and technology in the world.

This course begins with the analysis of the ideological resources of STS, then further interprets Sociology of Scientific Knowledge (SSK) to examine what is science, and then enters into the field of Technology Studies to examine what is technology, also it involves some forefront researches of STS, such as the turn from STS to Sound Studies and gendered STS. From the classics to the frontier, this course outlines a social and cultural studies of science and technology. We live in a material world dominated by science and technology. STS tries to open the black box of science and technology and provides theories and methods for understanding and reflecting the ideology dominated by science and technology. In addition to teaching specific theories and research methods in the field of STS, this course emphasizes on taking STS as a way to think about the world and a way to study the world.

16. 预达学习成果 Learning Outcomes

本课程预期让学生掌握的思维、知识、技能和方法如下：
1. 让学生认知和理解STS领域的一些关键问题和核心理念；
2. 教授学生如何从社会维度看待和考察科学技术是如何发展、应用和被讨论的；
3. 引导学生挑战、批判和解构固有的对于科学、技术和知识的认知假定；

4. 培养学生的分析技能，架构学生的知识基础，以帮助他们理解当代世界中科学和技术的内容和角色。

Upon successful completion, expected outcomes are:
1. To have students identify and understand some key analytic issues and concepts in the field of Science and Technology Studies;
2. To teach students how to see and examine the social dimensions of how science and technology are developed, used, and discussed;
3. To make students challenge and deconstruct assumptions about science, technology, and knowledge;
4. To provide students with analytic skills and a base of knowledge for understanding the content and role of science and technology in our contemporary world.

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.)

本课程计划16周完成，每周2学时

第一周　导论：什么是STS？
STS的背景介绍、学科状况和领域发展综述
本课程的整体课程设置、价值、意义和目标
课程作业与期末论文的要求

第二周　公众理解科学与公众参与科学
现代性，科学危机与公众理解科学
从公众理解科学到作为人文批判的科学传播——科学传播的三种模式
公众认知与参与科学

第三周　知识社会学：知识与现实的社会建构
了解知识社会学的重要学者及其思想：弗里克、埃米尔·迪尔凯姆、马克思·韦伯、马克斯·舍勒、卡尔·曼海姆
了解彼得·伯格的现实的社会建构及其知识社会学纲领
什么是知识？什么是常识？什么是客观现实？

第四周　默顿及默顿学派的传统科学社会学
了解默顿的传统科学社会学范式
梳理默顿学派的基本脉络和理论发现：科学的规范结构，科学共同体，社会中的科学家角色，无形学院，科学界的精英，科学中的社会分层等等
对默顿的科学社会学的批判

第五周　托马斯·库恩与史蒂芬·夏平
解读库恩的“科学革命的结构”
分析“范式”的概念，以及对范式概念的批判
解读夏平的批判编史学纲领：从“科学革命”、“利维坦与空气泵”，到“新冠疫情”
夏平是如何建构科学事实的？

第六周　科学知识社会学（SSK）：科学争论研究
哈里·柯林斯的“改变秩序”
哈里·柯林斯与特里弗·平齐的“勾勒姆系列”：关于科学你应该知道什么？关于技术你应该知道什么？如何认知医学？
应用案例解读科学争论研究

第七周　科学知识社会学（SSK）：强纲领与相对主义
大卫·布鲁尔的《知识和社会意向》，着重剖析科学知识社会学的四条强纲领
什么是相对主义以及如何认知它？
如何理解SSK？

第八周　实验室研究：实验室里的人类学家
布鲁诺·拉图尔与史蒂夫·伍尔加的《实验室生活：科学事实的社会建构》
诺尔·赛堤娜的《知识的制造》
迈克尔·林奇的《实验室科学中的技艺和人工事实》

第九周　SSK与后SSK：科学作为知识，文化，还是实践？

梳理SSK的整体脉络和谱系
介绍SSK后期的研究和发展
解读SSK与后SSK之间的争论

第十周　什么是技术以及如何认知它？
技术元勘领域的概况介绍
技术的社会研究和历史研究概况
卡尔·马克思与机器
从技术决定论到技术的社会形塑

第十一周　技术元勘的基本问题
技术物有政治性吗？
技术测试与试验
隐藏的技术——基础设施

第十二周　技术的社会建构（SCOT）
阐释技术元勘中的重要理论：技术的社会建构（SCOT）及其发展过程
解读“黑箱”的概念
分析对于“黑箱”这一概念的争论

第十三周　行动者网络理论（ANT）与技术系统
了解行动者网络理论（ANT），以及对ANT理论的反思与批判
当技术物变成关系会发生什么？
技术系统

第十四周　从STS到声音研究
STS到声音研究的转向
技术的社会建构理论（SCOT）和技术与技术使用者的互构理论在声音研究的应用及其价值
“声音研究”作为新兴跨学科领域的创建，及其理论、方法和研究概况
STS与声音研究的关系

第十五周　性别与STS
科学界的性别问题
科学的性别化与技术的性别化
女性主义科学与技术元勘

第十六周 总结与讨论：STS作为一种思维方式和研究方法
课程总结与延伸
理解STS作为一种思维方式的价值以及作为一种研究方法的功能

Week 1 Introduction: What is Science, Technology and Studies?
Background, history and development of STS
Arrangements, values and objectives of the course
Requirements of the course

Week 2 Public Understanding of Science and Public Engaging in Science
Modernity, scientific crisis and public understanding of science
From public understanding of science to science communication as a humanistic criticism
Public engaging in science

Week 3 Sociology of Knowledge: The Social Construction of Knowledge and Reality
Key thinkers in Sociology of Knowledge including Ludwik Fleck, Emile Durkheim, Max Weber, Max Scheler, and Karl Mannheim
The Social Construction of Reality – A Treatise in the Sociology of knowledge by Peter Berger
What is knowledge? What is common sense? What is reality?

Week 4 Traditional Sociology of Science: Merton and Mertonian School
Sociology of Science by Robert. K. Merton
Introduction to theories and ideas of Mertonian School
The criticism Merton

Week 5 Thomas Kuhn and Steven Shapin
The Structure of Scientific Revolutions by Thomas Kuhn

Interpreting the idea of paradigm and the criticism of paradigm
Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life, *A Social History of Truth: Civility and Science in Seventeenth-Century England*, *The Scientific Revolution* by Steven Shapin
How did Steven Shapin construct scientific facts?

Week 6 Sociology of Scientific Knowledge (SSK): Scientific Controversy
Changing Orders by Harry Collins
The Golem: What You Should Know About Science, *The Golem at Large: What You Should Know About Technology*, and *Dr Golem: How to Think About Medicine* by Harry Collins and Trevor Pinch
Using cases to represent the study of scientific controversy

Week 7 Sociology of Scientific Knowledge (SSK): Strong Programme and Relativism
Knowledge and Social Imagery by David Bloor
Interpreting the Strong Programme
What is relativism and how to understand it?
How to understand SSK?

Week 8 Laboratory Studies
Laboratory Life: The Construction of Scientific Facts by Bruno Latour and Steve Woolgar
The Manufacture of Knowledge by Karin Knorr-Cetina
Art and Artifact in Laboratory Science by Michael Lynch

Week 9 SSK and Post-SSK: Science as Knowledge, Culture or Practice?
Mapping SSK
Introduction to the researches of Post-SSK
Interpretation to the arguments between SSK and Post-SSK

Week 10 What is Technology and How to Think about it?
Introduction to sociological and historical studies of technology
Introduction to the field of Technology Studies
Karl Marx and the machine
From technological determinism to the social shaping of technology

Week 11 Some Issues in Technology Studies
Do artifacts have politics?
The testing of technology
The invisible technologies - infrastructure

Week 12 Social Construction of Technology (SCOT)
The theory of Social Construction of Technology (SCOT) and its development: *The Social Construction of Facts and Artifacts* and Preface to the (2012) Anniversary Edition of The Social Construction of Technological Systems the by Trevor Pinch and Wiebe Bijker
The idea of “black box” and the debate about it

Week 13 Actor Network and Technological Systems
Actor Network and the criticism of it
What happens when objects become relations?
Technological systems

Week 14 From STS to Sound Studies
The turn from STS to Sound Studies
The application of SCOT and the co-construction of users and technology in studying of sound and its value
Introduction to Sound Studies

Week 15 Gender and STS
Gender issues in scientific world
Gendered science and gendered technology
Feminist Science and Technology Studies

Week 16 Conclusion and Discussion: STS as a Way of Thinking and a Research Method
Summary and extension
Understanding the value of STS as a way of thinking and the function of STS as a kind of research method

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

授课教师将根据每节课的主题提供有针对性的阅读和参考资料

课程评估 ASSESSMENT

19.

评估形式 Type of Assessment	评估时间 Time	占考试总成绩百分比 % of final score	违纪处罚 Penalty	备注 Notes
出勤 Attendance		10%		无故缺席 5 次及以上为不通过 Students with unexcused absence of more than 5 times fail.
课堂表现 Class Performance		20%		考察学生是否认真听课及参与课堂讨论的积极性和表现 Participation in discussion and in-class exercises
小测验 Quiz				
课程项目 Projects		30%		学生的案例研究及其课堂汇报 Case study and presentation
平时作业 Assignments				
期中考试 Mid-Term Test				
期末考试 Final Exam				
期末报告 Final Presentation		40%		按授课教师要求在一定范围内自选题目撰写学期论文 Students are expected to write a paper focusing on a specific topic or text .
其它（可根据需要改写以上评估方式）Others (The above may be modified as necessary)				

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