

TUM Master's Day

Responsibility in Science, Engineering and Technology M.A.

Science and Technology Studies M.A.

Technische Universität München

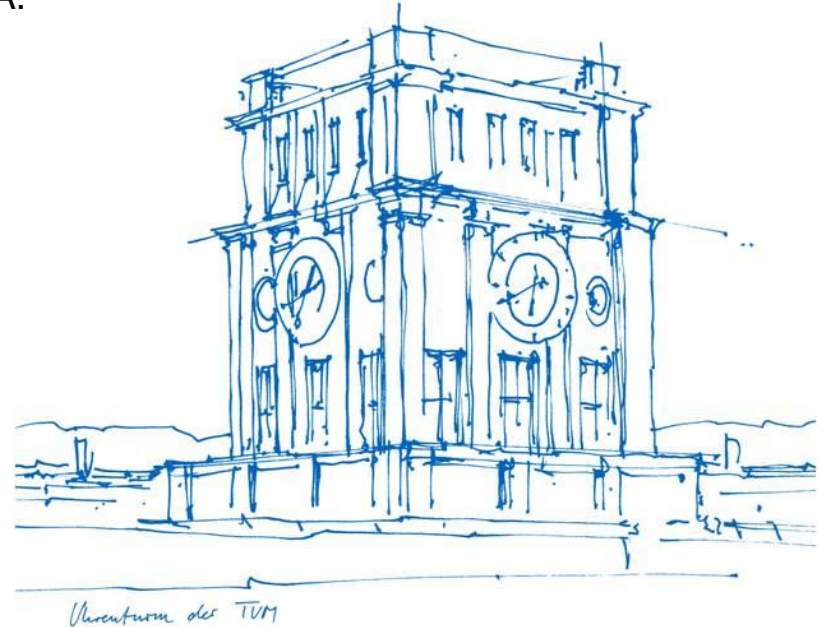
TUM School for Social Sciences and Technology

24.03.2025

Clara Valdés Stauber: STS & RESET program coordinator

Patricia Abicht: Study Office STS Team

Elisenda Passola, Yiğit Ülker: STS & RESET students/alums



Agenda

I. Info Session: RESET & STS

- 1) Highlights
- 2) RESET
- 3) STS
- 4) Career Options

II. Q&A

III. Breakout Rooms with students / alums

IV. Open Consultation

Highlights

- Very good student-teacher ratio: cohort 15-30 students, courses mostly 10-20 students
- Interdisciplinary and international cohorts
- Support: e.g. funding for study trips and student initiatives, MAXQDA licence
- Special events: e.g. 'Student Spring Gathering'
- (extra-curricular) Going Abroad options
- Opportunities: student assistant jobs, MA thesis calls at the Dept. STS and SOT

Science and Technology Studies (STS) is an interdisciplinary research field that explores the interactions between science, technology, and society.

Master's Programs Overview

Both programs explore the interplay of science, technology (development), politics, and social dynamics.

„**Science and Technology Studies**“ (M.A. STS) program: greater **focus on the foundations** of science and technology studies as a field of research, the **philosophy and history** of science and technology, **methods of qualitative research** and in-depth exposure to specific research topics.

„**Responsibility in Science, Engineering and Technology**“ (M.A. RESET): also deals with the above-mentioned topics but approaches them from a **more practice-oriented perspective**, always putting **emphasis** on the question: What does **responsibility** mean in this context?

Responsibility and responsiveness: Focus on the socio-technological dynamics and effects of innovation and research.

- Graduates are able to identify and critically discuss social, economic, political, cultural and legal aspects of science and technology.

An immersive and practice-oriented education: Innovative term structure and hands-on immersive learning.

- Case studies, projects and internship to foster new forms of collaboration across institutions and disciplines.

Intensive academic support: Small course sizes, in-depth discussions and individual support from RESET's teaching staff.

- Support from the **Elite Network of Bavaria**.

International competitiveness: International student groups and projects to prepare you for a global working environment.

- Expert knowledge at the cutting edge of international technoscience research.
- Extensive communication and project management skills.
- Internship and option of doing a semester abroad.

RESET

Introduction	Immersion Project	Technology and Society					Immersion Project	12
		Ethics	Politics	Economics	Law	Media		
		Methods in STS						5
								10
		Skills Courses (e.g. English Writing, Moderation)						3
								Sem 1
STEM 1 & 2 with Intensive Mentoring								12
STS Core Topics 1-3								15
Skills Courses (e.g. Project Management, Statistics)								3
								Sem 2
Master's Blog							Science School	7
Internship								
Practicing Research in STS							6	
								Sem 3
Master's Thesis Colloquium								30
								Sem 4

Immersion Project

A 'Datafied' Future of Urban Mobility? Exploring Responsibility in Data-Driven Mobility Innovation and Governance

- Explored the use of big data and machine learning for urban mobility
- Connected to our department's work "Munich Cluster for the Future of Mobility in Metropolitan Regions" (MCube)
- Spun out into euMove as TUM-wide interdisciplinary student project



Water Infrastructures and Forest Futures: Nature Contact and Technological Control

- Examined the social, political, and environmental impacts of water management
- Included an excursion to the Bleiloch dam in consultation with agencies involved with water management in Thuringia



Science and Technology Studies conveys empirical research methods and analytical skills that enable students to critically address the social conditions and consequences of contemporary science and technology.

In-depth exposure to interdisciplinary approaches: how to address various social, historical and policy aspects of contemporary developments in science and technology using methods from social sciences, philosophy or the humanities.

- Addressing technoscientific problems in a critical and diagnostic way with a focus on problem-solving
- Conveying reflexive, collaborative and communicative skills.

Research orientation and specialization: Specialization in STS research topics early in your studies that allows you to lay foundations for further research in the field.

- Possibility of specialization in the Philosophy of Science and Technology or the History of Science and Technology.

Empirical research methods and analytical skills: Rigorous training in social science research methods.

- Empirical basis to address the conditions and consequences of contemporary science and technology.

Science Technology Society

INTRODUCTION Semester 1

Modul STS 1:
Practices and Politics of
Science and Technology

10 Credits

Modul STS 2:
Philosophy of Science
and Technology

5 Credits

Modul STS 3:
History of Science
and Technology

5 Credits

**Lecture Series &
Academic Skills**

5 Credits

Methods 1

5 Credits

KEY ISSUES Semester 2

Core Topics in STS

Choice of 3 modules
5 Credits each

in total 15 Credits

STS-MINT

7 Credits

Methods 2

8 Credits

ADVANCED STUDIES Semester 3

Advanced Topics in STS

Choice of 4 modules
5 Credits each

in total 20 Credits

Practicing Research

10 Credits

THESIS Semester 4

Master's Thesis

Colloquium

30 Credits

120 Credits

Core & Advanced Topics

Technoscience & Narrative Cultures

Media & Digital Cultures

Publics & Participation

Theoretical Reflections on Law and Technology

Law and Digitization in Action

Co-construction of Technology & Users

Responsible Research & Innovation

Industries and Innovation

Ethics and Responsibility

Politics & Governance

Knowledge Cultures & Institutions

Risk & Security

Gender & Diversity

NatureCultures & Sustainability

Infrastructures & Design

Biomedicine and Health

Epistemology and Ontology

Information and Society

RESET

STS

1st semester:

- students learn the basics of **qualitative social research**: they are familiarized with specific methods as well as their underlying philosophical assumptions.

Practice-oriented learning:

- Semester-long **immersion project**: apply theories to a current controversial debate in small project groups.
- **Module „Technology and Society“**: interactions between science, technology and society in five blocks (politics, economics, law, ethics and media).

Foundations & history of Science and Technology Studies (STS):

- **Development and approaches of major STS currents**: most important theories, researchers and case studies.
- **Modules STS2 (“Philosophy of Science and Technology”) and STS3 (“History of Science and Technology”)**: philosophical foundations and historical developments of science and technology.

2nd semester:

- In-depth examination of **core STS topics**: selection of three core topics in accordance with own interests.
- **STEM courses** and analysis of the respective disciplinary knowledge cultures.

Practical skills e.g. in moderation, intercultural communication or international project management

Deepen knowledge in **social science methods**.

3rd semester:

- **“Practicing Research”**: Develop research questions (RESET) or conduct a full project (STS) as master’s thesis preparation.

- **Internship** and with experience sharing in a self-organized mini symposium (the **“Science School”**).
- Science communication training in the **“Master’s Blog”** course.

Four Advanced STS Topics

Career Paths

M.A. STS

Students are actively encouraged to gain professional experience in internships beyond the requirements of their curriculum during their studies.

- Prepares for further careers in academia and STS research, and to make them internationally competitive applicants in STS and related fields.
- Outside of academia, STS graduates are qualified for careers in numerous areas such as science and technology management, consulting and policy advice, science communication and journalism, science funding and policy

M.A. RESET

The mandatory internship provides valuable insights into future career options.

- Prepares for public and private sector careers by integrating governance, responsibility, responsiveness, precaution, and care into science and technology innovation—from agenda-setting to implementation.
- International qualification for a wide range of career fields within governmental institutions, international organizations, innovative firms (both established companies and start-ups), NGOs, think tanks, consulting and academia.

Focus areas examples: sustainable energy, biotech, healthcare, IoT, big data, and urban infrastructure.

Application: [Website M.A. STS & M.A. RESET](#) -> "Eligibility Requirements" & "How to Apply"

Contact: School Office Team studium.sts@sot.tum.de

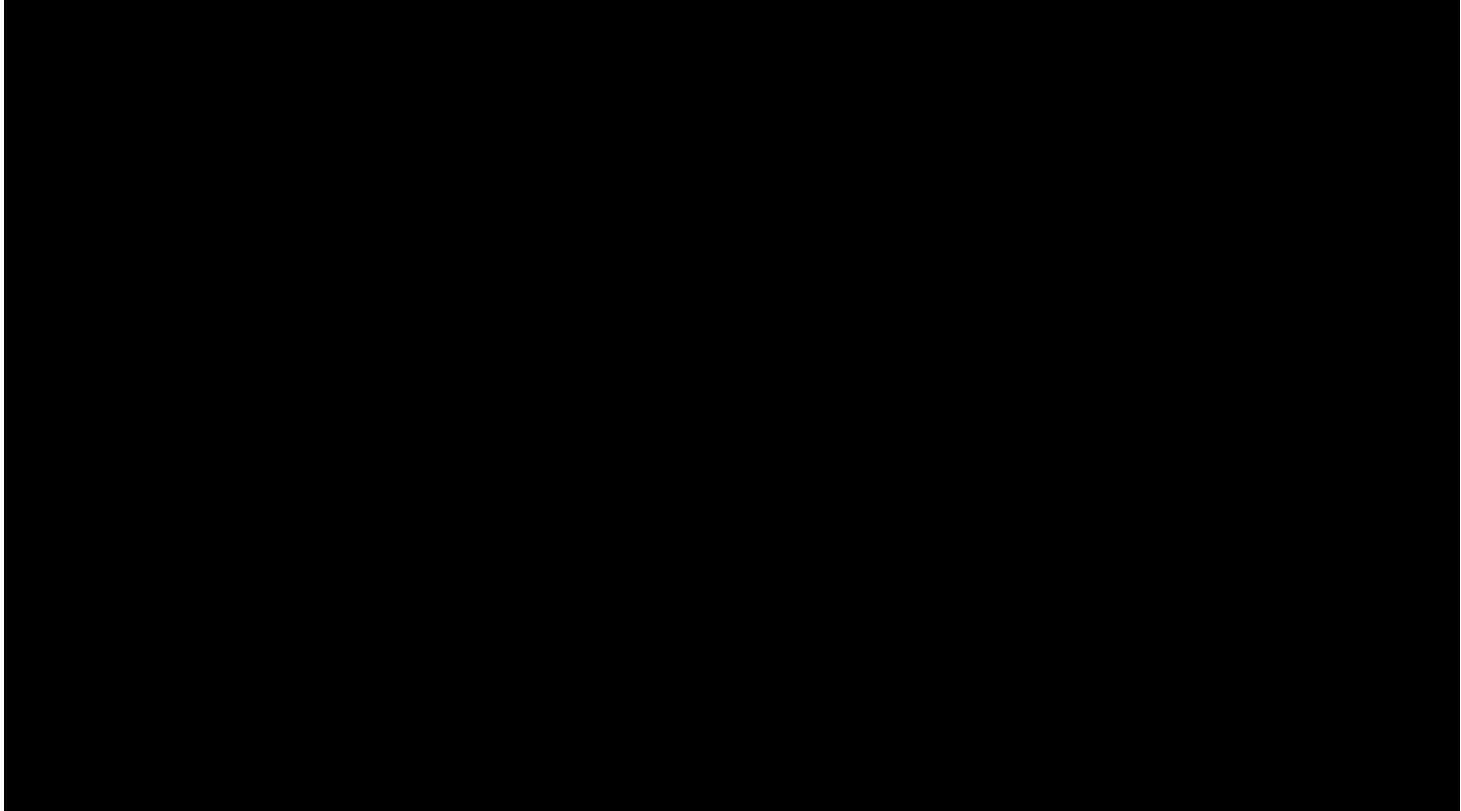
Website: [Study Programs - STS M.A. & RESET M.A.](#)

Courses of the summer semester will be listed here:

- [STS](#)
- [RESET](#)

Applications open till 31. May!







Anna Ackermann

Junior Digital Coordinator @ United Nations Development Programme

» *RESET has equipped me with the theoretical and practical framework to contribute to responsible innovation – currently at the UNDP. **The unique value of RESET is its applicability to all fields of Science and Technology, no matter if its engineering, teaching or material science.** It encourages students to take what they bring and reform it.* «



Valérie Novak

Journalist @ Bayerischer Rundfunk

» ***RESET influences my journalistic work on a daily basis.** At the BR I turn research topics from my studies into features – to include all perspectives and the regulatory challenges stems from RESET.* «



Mai Do

Responsible AI Specialist & AI Ethicist @ Airbus

» ***Through RESET I learned to balance competing priorities while maintaining rigorous objectivity,** particularly when evaluating downstream implications of emergent technologies. This foundation has proven invaluable in my work as an AI ethicist, where I regularly translate abstract ethical principles into concrete, implementable policies.* «

Clara

Trish

Eli

- ~~• general things~~
- **What are the possible career paths and job opportunities?**
- Einschreibe Voraussetzungen, Online-Angebot, spätere Berufsfelder
- details about the program and application
- **Is RESET program suitable for people who are interested to pursue a PhD too? Are there lessons to train students for academic?**
- ~~• I got my bachelor's degree abroad. I currently live in Germany and have a residence permit here. Am I still Non-EU student?~~
- Are there any extra requirements for students with a bachelor's degree in psychology? And is there a system to pick the 90 ECTS
- What I need to apply
- Courses and application procedure
- **What is the curriculum about, what can I do with the masters. How can I prepare myself to start contributing to the domain**
- admission requirements, number of students admitted each year
- What courses are an requirement to take beforehand and what courses can you take while doing the masters degree?
- I want to know whether I can read any of TUM's Master's degree programs with my BA. (English) degree from Ghana.
- ~~• Information~~
- **I want to audit a course from the course. Where can I find the finalized list of courses for this semester?**
- **What opportunities are there for MA students to contribute to the department's research groups in addition to their colloquiums?**
- How the masters are structured, what the topics look like and also job opportunities after finishing.
- The curriculum of the three master's programs and an overview of the German university system.
- **Career prospects of the program**
- ~~• i want to obtain general information~~

MA Thesis

- “Deconstructing the pharmaceuticalisation of **reproductive health**: The case of menopause treatment” (Yuron Kolar)
- “From one platform to another: The continuity of automobile imaginaries through the German government platforms for **electric mobility and future mobility**” (Fabian Kuntz)
- “Keeping Hydrogen Promises? **Wasserstoffstrategien Deutscher Bundesländer** im Spannungsverhältnis zu den Anforderungen des Sozio-Technischen Systems Wasserstoff” (Maximilian Nieder)
- ~~“Of Coffee Cups, Conscious Consumers, and Cultures: A Case Study on **Plastic Waste Reduction** and Responsible Innovation in the City of Munich” (Verena Zink, with startup ReCup)~~
- “To Collaborate and To Scale Up: The Entrepreneurial Pathway to Put **Bioeconomy** into Practice” (Lena Lübbe)
- “How **Neurotech Start-Ups** Envision Ethical Futures” (Sophia Knopf, published in *Science and Engineering Ethics*)

Home > Science and Engineering Ethics > Article

How Neurotech Start-Ups Envision Ethical Futures: Demarcation, Deferral, Delegation

Original Research/Scholarship | Open access | Published: 02 February 2023
Volume 29, article number 4, (2023) [Cite this article](#)

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