

Boston University Study Abroad, Dresden Programs

**The Social Nature of Technology -  
Historical, Cultural and Social Aspects of Technological Development  
(CAS SO 315 E DR)**

Date: Spring Semester 2013

Instructors and Contact Information:

a) Theory Course:

Prof. Dr. Dr. Bernhard Irrgang  
Michael Funk ([michael.funk.dresden@googlemail.com](mailto:michael.funk.dresden@googlemail.com))

b) Project Course:

Hendrik Müller, MA ([Hendrik.Mueller@tu-dresden.de](mailto:Hendrik.Mueller@tu-dresden.de))

Course Overview: The course provides insights in the historical, cultural and philosophical dimensions of technological development. It combines excursions to relevant facilities of the production, use and exposition of technological innovations with lectures and seminars on the relations between technology, sciences and society. At the end each student should be able to write a philosophical essay about this topic.

Methodology: The course will be organized on the basis of excursions and seminars prepared by the students and lectures given by the instructor or guest lecturers. During the project part of the course, students are to prepare a dossier reflecting their experiences and insights gained during the excursion. Students' work will be used as a basis for the lectures/seminars in the theoretical part of the course. The overarching aim of the theory part is learning how to write a philosophical essay.

Required Reading:

- a. Course reader
- b. see syllabus

Grading Criteria

Attendance and Participation: 20 % (both parts: project course and theory course [read the required readings!])

Presentation in class (project course) and 4 Abstracts (theory course; 100 words per Abstract): 20 %

Log Book: 30 % (project part)

Essay (4 to 10 pages on a topic chosen from the topics discussed in the "Exercise" of the theory part. You should be able to reflect and discuss a philosophical topic from your personal point of view. Express your idea in clear words and find good reasons for your thesis!): 30 %

Deadlines for submitting:

the logbook (project part): **April 15**

the essay (seminar/lecture part) **April 15**

## Plagiarism

All students are responsible for having read the Boston University statement on plagiarism, which is available in the *Academic Conduct Code*. Students are advised that the penalty against students on a Boston University program for cheating on examinations or for plagiarism may be "...expulsion from the program or the University or such other penalty as may be recommended by the Committee on Student Academic Conduct, subject to approval by the dean."

### a) Seminar/Lecture part of the course:

**Room:** Feb. 18: SE 1, 101  
Feb 28 – March 28: SE 2, 122

**Time:** Feb 18: 1:00 pm – 2:30 pm, both groups  
Feb 28 – March 28:  
Group I: Thursday, 11:00 – 12:30 am  
Group II: Thursday, 13:00 – 14:30 pm

#### 1. Chronology:

February 18:

Welcome and introduction to the course.

February 28:

"Technologies": What is the meaning of "technics", "technologies" and "technê"? How do we use technologies, both in everyday life and sciences? Find examples in the history of East and West Germany!

Reading: ADAM BRIGGLE, CARL MITCHAM & MARTIN RYDER 2005: "Technology: Overview." In: CARL MITCHAM (ed.) 2005: *Encyclopedia of Science, Technology, and Ethics*. Detroit a.o., pp. 1908-1912.

Write an abstract (100 words) and sent till **February 25** to:  
michael.funk.dresden@googlemail.com

March 7:

"Knowledge": What is the meaning of "knowing that", "knowing how", "propositional knowledge" and "tacit knowledge"? How is knowledge related to technological and economic development? Find examples in the history of Industrialisation in Saxony and the current development after the reunification!

Reading: CARL MITCHAM & ROBERT FRODEMAN 2005: "Toward an Ethics of Science and Technology as Knowledge." In: CARL MITCHAM (ed.) 2005: *Encyclopedia of Science, Technology, and Ethics*. Detroit a.o., pp. lx-lxvi.

Write an abstract (100 words) and sent till **March 4** to:  
michael.funk.dresden@googlemail.com

March 14 (Prof. Dr. Dr. Bernhard Irrgang):

“Expertise”: What is the difference between experts and novices? How can experts communicate with non-experts? Can we trust our genes or the guys that tell us about our genes? Find examples for knowledge and authority of experts in biotechnologies! Sustainable development and the future of nature protection: Do we need new experts or more enlightenment to save our planet?

Reading: ROBERT P. CREASE & EVAN SELINGER 2005: “Expertise.” In: CARL MITCHAM (ed.) 2005: Encyclopedia of Science, Technology, and Ethics. Detroit a.o., pp. 731-739.

Write an abstract (100 words) and sent till **March 11** to:  
michael.funk.dresden@googlemail.com

March 21:

“Responsibility”: What is the relation between expertise and responsibility? Are experts more responsible for technological development and its ethical implications than non-experts? Is it forbidden to develop new military technologies, or do we need better weapons to avoid collateral damage and friendly fire instead? Can ethics help to humanize warship, or are ethics useless because of political egoism, economic power and lobbyism? Find examples for the relation between warfare and sciences and technological development!

Reading: CARL MITCHAM 2005: “Responsibility. Overview.” In: CARL MITCHAM (ed.) 2005: Encyclopedia of Science, Technology, and Ethics. Detroit a.o., pp. 1609-1616.

Write an abstract (100 words) and sent till **March 18** to:  
michael.funk.dresden@googlemail.com

March 28:

1. Summary

2. Instructions for the essay:

“Sharing”: How do we share technologies, knowledge, expertise or responsibility? Discuss the impact of the internet, smartphones, privacy, genetic information or file sharing! What is the difference between material sharing and medial sharing? Write an essay!

3. Evaluation

## 2. Suggested Reading:

Ihde, Don 1991: Instrumental Realism. The Interface between Philosophy of Science and Philosophy of Technology, Bloomington a.o.: Indiana University Press

Mitcham, Carl and Robert Mackey (ed.) 1983: Philosophy and Technology. Readings in the Philosophical Problems of Technology, New York: The Free Press

### 3. Terms and Conditions:

#### **Regular attendance is obligatory!**

Students are expected to attend all lectures and excursions; students have to sign up for each session. Students absent from class more than two days for illness should be under a doctor's care and should present their course instructors with the doctor's notice (Arbeitsunfähigkeitsbescheinigung).

Any unexcused absence will have a negative impact on the final grade. Excessive unexcused absences may result in a penalty grade F for the course.

#### **PLEASE READ**

Disturbance of class discipline, cheating and plagiarism are strictly forbidden in this course. Please read and adhere to the Boston University regulation Academic Conduct Code. Any student appearing in class with symptoms of alcohol or drug abuse may be suspended or dismissed from the course. The deadline for the essay (the end of the course) is binding.

**b) project part of the course**

**Room: SE 2/022**

**Time: Group II: Thursday, 11:00 – 12:30 pm**

**Group I: Thursday, 13:00 – 14:30 pm**

**1. Chronology**

- February 21: 1. Introduction into the Project Course on History, Culture and Sociology  
2. Preparation of Excursion to Leipzig – Zeitgeschichtliches Forum

General Questions:

- I. What are the differences between East and West Germany?***
- II. How did the unification process change the face of the two formerly separate states?***
- III. What major events have shaped the developments of the two German states? What were crucial differences between everyday life in East and West Germany? What social and political circumstances have triggered the peaceful revolution in the German Democratic Republic?***
- IV. How did technology influence the development in East and West Germany? What about the consequences for the social development in the two states?***

February 22: Group I and II: Excursion to Leipzig – Zeitgeschichtliches Forum

- February 28: 1. Discussion and Reflections of Excursion to Leipzig  
2. Preparation of Excursion to Technische Sammlungen/Technical Collections

General Questions:

- I. What sectors of industry have developed in Saxony within the past century?***
- II. How did the industrialization in Saxony influence the social development in that region?***
- III. How did the Saxonian economic structure change after the re-unification of Germany and how has that affected the social development in Saxony?***
- IV. How are technology and knowledge connected, both theoretically and practically? How does that influence the economic development?***

March 5: Group I: Excursion to the Technische Sammlungen Dresden

March 6: Group II: Excursion to the Technische Sammlungen Dresden

- March 7:
1. Discussion and Reflections of excursion to Technische Sammlungen Dresden
  2. Preparation of Excursion to Max-Planck-Institute
    - a. General Questions:
 

***What are currently the main fields of research and application in biotechnology? Which fields of biotechnology are considered risk technologies and why? How are expertise and responsibility connected?***
    - b. student group presentation
    - c. tasks for excursion:
 

***Why did Max-Planck-Institute opt for Dresden?***  
***What is NetzwerkBiomet Dresden?***  
***What role does ethics play in dealing with risky biotechnologies?***  
***How do experts and laymen communicate?***
- Required Reading:  
<http://biosaxony.com/en/>  
<http://www.mpi-cbg.de/en/home.html>
- March 12: Group I: Excursion to MPI
- March 13: Group II: Excursion to MPI
- March 14:
1. Discussion and Reflections of excursion to MPI
  2. Preparation of Excursion to the Museum of Military History/ Militärhistorisches Museum
    - a. General Questions:
 

***How did the military development influence and change Germany over the centuries? What role does ethics and responsibility play in warfare?***
    - b. student group presentation in preparation of the excursion
    - c. Tasks for Excursion:
 

***How do technology and knowledge influence war and warfare? Is there something like a responsible war?***
- March 15: Group I and II: Excursion to the MHM
- March 21: Discussion and Reflections of Excursion to MHM
- March 28:
1. Résumé of all excursions
  2. Instructions for the Logbook
  3. Evaluation

## 2. Terms and Conditions:

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The deadline for the logbook (the end of the course) is binding.

I. Preparation: a minimum of 1 hour for each class meeting.

III. Homework: written assignments must be legible, neat, and submitted on time. Only in cases of illness or unforeseen circumstances will late work be accepted.

## 3. For student group presentations:

Please, include the following information in your student group presentations:

- a. the history of the particular organization; historical development in the given sphere of activity;
- b. the role of the chosen field in the host country and in the international arena
- d. the organization's goals and missions and what they do to achieve them; effectiveness of the organization within its sphere of activity; competition

Boston University Study Abroad, Dresden Programs

Spring 2013

Seminar/Lecture part of the course:

Instructors:

Michael Funk, MA ([michael.funk.dresden@googlemail.com](mailto:michael.funk.dresden@googlemail.com))

Room:

<b>Time:</b>	<b>Group I:</b>	<b>Thursday, 11:00 – 12:30 am</b>
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“Expertise”: What is the difference between experts and novices? How can experts communicate with non-experts? Can we trust our genes or the guys that tell us about our genes? Find examples for knowledge and authority of experts in biotechnologies! Sustainable development and the future of nature protection: Do we need new experts or more enlightenment to save our planet?

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3. Evaluation

## Project part of the course

Instructor: Hendrik Müller, ([Hendrik.Mueller@tu-dresden.de](mailto:Hendrik.Mueller@tu-dresden.de))

Room: SE 2/022

Time: Group II: Thursday, 11:00 – 12:30 pm  
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