Module Number	Title:
6	**Research Ethics and Technics**

Module type: compulsory		**Language:** English	**Group Size:** 20 student
Study semester: 2	**Availability:** summer semester		**Duration:** 1 semester
Workload: 240 hrs	**Credits:** 8 CP	**Contact time:** 68hrs	**Independent Study:** 172 hrs

1 Courses

a) Placement 4 PPW
b) Lecture 1 PPW
c) Seminar 1 PPW

2 Intended Learning Outcomes

This module consists of two parts: Research ethics and a 4-week lab rotation (part research technics).

The idea of an integrative module stems from the need for making the students duly aware of the practical (ethical and pragmatic) and theoretical dimensions of their own science, and of the non-trivial interactions between the two levels. The integration of the ethical module with the lab rotation should help by providing the students first-hand experience (in a relatively short time) of the many facets of neuroscientific research, as well as with the tensions and contradictions internal to the field.

The way science is conceptualized and practiced today has been shaped by historical developments, and neuroscience has complex ethical and social dimensions. In the research ethics part students should recognize and understand that science is a social and cultural activity.

After attending the research technics part the students should be able to independently carry out experiments with the technics they have learned during their stay in different laboratories (lab rotation). The type of technics learnt will depend on the working group.

Upon completion of the research ethics part the students will be able to describe the basics in philosophy of science, including the logic of science and the role of norms and values in science, the role of rhetoric language and metaphors in science, theoretical and historical foundations of neuroscience, models of reasoning in biomedical ethics and research ethics, with a special focus on research on humans and research data management (patient autonomy, record keeping, data protection and safety). They will be able to understand the “usefulness of useless knowledge” (Russel) and will be able to understand, analyse and present scholarly texts, critically reflect upon current research, including its historical, social, and ethical dimensions and test coherence and consistency of ethical arguments. They will be able to present these acquired skills in a reduced form in a poster format.

3 Content

Lectures and Seminars:

- Basics of biomedical ethics
- Critical history of the neurosciences
- Research ethics (focus on human subjects)
- Good scientific practice
- Current topics in neuroethics
- Neuroscience, Identity and “Free Will”
- Research data management

Practicals:

	The lab rotation is a practical in different laboratories (lab rotation) to get profound insight into specific methodologies and scientific questions. After its completion, a summary of the experimental work is to be drawn up and to be presented orally during the faculty seminar of the working group. The methods learnt will depend on the working group.
4	**Teaching methods** Lecture, seminar with oral reports, group work, collective poster presentation
5	**Prerequisites** **Formal:** Successful completion of module 1. Depends on faculty or working group. **With regards to content:** Depends on faculty or working group.
6	**Examination types** Poster presentation: Poster (50% of overall mark) and individual oral presentation (50% of overall mark). A team of 2 - 4 students prepares in home work a poster (e-poster or printed in DIN A0) and presents the poster orally in minimum 10 and maximum 20 minutes during the last seminar sessions. The evaluation criteria for the oral poster presentation and content and lay out of the poster will be handed out at the beginning of the module.
7	**Requirements for award of credit points** Participation in the seminars and lab rotation. Presentation of own results/data gathered during the lab rotation in the institute´s seminar. A pass in the poster presentation. Return signed and filled in routing card to coordinator.
8	**Module applicability (in other study courses)**
9	**Assessment** The mark given will contribute to the final grade in proper relation to its credits.
10	**Module convenor and main lecturers** Prof. Dr. Heiner Fangerau, Dr. Fabio de Sio, for the lab-rotation: variable
11	**Further information** Lab-Rotation: Register directly with the faculty/working group. Minimum stay per lab is 1 week. Return signed and filled in routing card to coordinator.