

ABC of Tutoring (Group Tutoring)

The Goal of first year Tutoring

The first year of studies at EPFL represents an important change for students, with their integration into a large student body as much of an issue as the level of academic demands.

Tutoring has been put in place in order to help students succeed in adapting to college life and in acquiring effective learning skills.

Format of the Tutoring

At the exercise sessions, students will be broken into groups of eight, each with a tutor. These groups will remain together for the whole semester.

Under the leadership of the tutor, they will work on an exercise following a 5-step method:

M1. **Understanding** what is asked by the exercise:

Describe the nature of the problem, reorganize it, and clarify the terminology.

M.2 **Analysis** of the exercise:

Link the ideas and the terms of the problems to the theory and the content seen in class; identify what is known, what needs to be known in order to solve the problem, and what is unknown.

M.3 **Find methods** of solving the problem:

Think up ways of solving the problem.

M.4 Choose a method of **solving** the problem:

Choose the solution that at first sight appears to be the quickest, the simplest, or even the most elegant, ensure you use the correct terminology, simplify as much as is possible before calculating.

M.5 **Discussion** of solutions

Critique, evaluate and compare the different solutions that were used by the group members

Ideally each of the first four steps will follow the following three-part sequence:

T.1. A time for individual working with each person working on the problem quietly

T.2. A time for exchange between students (2 or 3 students from the group working together) when, by their questions, students explain their ideas to each other and can develop their ideas through the responses of others

T.3. A time for led by the tutor to review the work of the students

Depending on the skillfulness of the students and the nature of the problem, the different steps of this method and the three parts to the sequence of discussion can be more or less developed. The tutor will identify the key points to address and will drive the exercise sessions.

The exercise series and homework:

Not all exercises are meant to be completed during a tutoring session. Tutoring aims to help acquire a better understanding of what is requested by a problem as well to develop efficient problem solving strategies. The tutoring must essentially help students to develop the capability to solve problems on their own.

For this reason we recommend starting a session with discussion of the solutions (step M.5) of the exercises from the previous session.

It is advised that the exercises that are done by the students outside the tutorial are such that they allow them to practice their capacity to solve problems on their own, a skill that will be indispensable to them for tests and examinations. Carefully follow the instructions of the teacher of the subject.

Advice for the tutors:

- a) Help the students to organize the room setting to round tables to allow for discussion.
- b) Introduce yourself briefly and invite everyone to do the same (name, surname, where they are from). Note the names of the students and their contact details.
- c) Indicate that you are responsible for organizing the session (working in groups, time management, the requirements at the end of each session, identifying the work required...)
- d) Ensure the discussion creates a climate of listening in mutual respect. In particular, identify that there is no such things as a bad question or a bad idea. On the contrary, it is essential that everyone can express what they think.
- e) In this way the weaker students will express and get past their initial difficulties and stronger students will develop their ability to present their ideas clearly.
- f) Get all your students to explain their understanding of the problem, to take part in debate and discussion and to explain their point of view. If they become stuck, direct their work with questions.
- g) Do **not solve the problem for the students** and don't demonstrate your knowledge to them. They must solve the problems and explain the content matter.
- h) To finish the session, recap for the students what they are expected to do for next week.
- i) In the case of a difficulty or a problem that is not solved, it is best to refer to your doctoral assistant or the Professor in charge.