Initial experiences with e-courses in Mathematics

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Basic e-learning elements:

- ▶ e-mail,
- ▶ forums,
- ▶ personal web page,
- ▶ computer lab exercises in mathematics,
- ▶ ...

Advance e-learning:

- ▶ e-course designed with the course management system (CMS) Moodle.

E-courses:

- ▶ Introduction to numerical mathematics,
- ▶ Models of geometry.

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Numerical mathematics is a part of mathematics in which numerical methods for finding approximate solutions of mathematical problems are developed. Problems are often solved using algorithms that can be coded using: C++, Fortran, Mathematica, MatLab, Excel,...

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Models of geometry is a course in which we study four geometries. Main teaching outcome:

- ▶ to understand differences among the geometries.

Introduction to numerical mathematics

E-course objectives:

- ▶ to explain numerical methods by examples in Mathematica and C++,
- ▶ available teaching materials,
- ▶ homework assignments,
- ▶ seminars,
- ▶ grading.

Models of geometry

E-course objectives:

- ▶ to visualize different models of geometry,
- ▶ seminars,
- ▶ online test.

Conclusions on e-learning

- ▶ E-course provides us with a good "closed" system that makes administration and communication easier.
- ▶ E-learning is well accepted by students and they are well acquainted with the technology.
- ▶ E-learning helped me do a better job. Students still have to work hard in order to achieve course objectives.

Conclusions on e-learning

- E-learning is a good "teaching tool".
- E-learning must not be forced.