Practical models for predicting student attendance at Dennis Gabor College (Praktikus modellek a GDF hallgatói jelenlét jóslására)

Elemér Károly Nagy nagyek@gdf.hu

This presentation is offering estimation models for a very simple and very practical question:
- What percentage of students will attend the Nth lecture / laboratory / workshop?

There are several mathematical models that try to answer this simple questions, yet there are variables affecting the answer, including:
- Academic policies
- Type of education (regular or correspondence, BSc or technical certification)
- Course type (laboratory or theory, introduction or expert course)
- Mid-term assignments (both in the course, and the effect of parallel courses)
- Amount and quality of distance learning materials
- Weather (season, temperature, rain)
- Student's timetable
- Teacher's personality

The answer to this simple questions helps tremendously in answering such questions as:
- Which room should be scheduled for the given class (so that number of computers > number of students)?
- How many laboratory groups should be planned for X students if the laboratory has Y workspaces so that every student has at least 90% to get a workspace?
- When should mid-term assignments start (the later they start, the less computers are needed in the lab)?
- How feasible is it to merge laboratory groups mid-term?
- What is the impact of scheduling mandatory basics at the beginning of the course, as reflected in the grades?

The author collected attendance statistics for four semesters from a handful of different courses, and although this data is nor representative, nor mathematically feasible for an exact formula, it is a tested rule-of-thumb for planning course-related activities, schedules and resource allocation.