



Upgrade of mathematics for foreign students

Course description:

Duration: 10 work days in August – two to three weeks before intro days
4 lectures of 45 min per day.
4 lectures of assignments of 45 min per day, with student help.

Syllabus:

Differentiation:

The Derivative as a function.
Differentiation Rules.
Derivatives of selected Functions.
The Chain Rule.

Applications of Derivative:

Slopes and Tangents.
Monotonic Functions and the first Derivative Test.

Integration:

The Indefinite Integral for selected Functions.
The Definite Integral.
Integration by Substitution.

Applications of Integration:

Areas.
Volumes by Slicing and Rotation About an Axis.

Differential Equations:

Separable Differential Equations.
First-Order Linear Differential Equations.

Teaching Material:

Handed out on day one.

Evaluation:

Approval based on: Study activity during the course and the punctual handing in and approval of mandatory assignments.