

Course requirements
Mathematics A1a - Calculus
2009/10/1

Neptun id. : BMETE90AX00

Maximum allowed absence rate: 30%

Lecturer: Dr. Anikó Csákány

Department of Stchastics, Institute of Mathematics, e-mail: csakany@math.bme.hu, office: H510

Faculty Signature:

There will be two midterm tests (80 minutes), each for 20 points. By the end of the semester students are required to have at least 6 points on each midterm tests (a total of 12 points on the two tests). Each test can be retaken at the end of the semester. In midterm tests students can use a pocket calculator and the formula sheet handed out by the Department. As a last chance to get the faculty signature there will be a make up test (90 minutes) during the make up week. The result of this last test is either „Fac. Sign with 12 points” or „no signature”.

1. For students who had already passed the Mathematics placement test:

Students having a score on both midterm tests no less than 30% get the faculty signature (they are allowed to take the final exam).

2. For students who did not take a Mathematics placement test:

To get the faculty signature they are required to take

- a.) a placement test and earn a score no less than 50% and
- b.) both midterm tests and earn a score no less than 30% on both.

Students will take at least 8 short open book quizzes during the semester, each for 10 point. The lowest two quiz scores will be dropped. The average earned on remaining quizzes will be added to the total score after taking the final exam. There will be no make up for quizzes.

Grading system: at the end of the semester there will be a written final exam (120 minutes) for 60 points. To be successful students are expected to reach at least 40% (24 points) on the final exam.

Total score = points on midterm test (min. 12, max 40) + points of final exam (min 24, max 60) + points of quizzes (min 0, max 10)

The final grade for the subject based on the „total score” will be calculated according to the following chart:

- 39	failed
40 - 54	passed
55 - 69	satisfactory
70 - 84	good
85 – 110	excellent

Topics: Complex numbers. Vectors, lines and planes in 3-space. Numerical sequences. Limits of functions, continuity. Differentiation, rules of derivation. Mean value theorem. L'Hospital Rule. Extremal values, graphing functions. Optimization. Taylor's Theorem.. Indefinite integral. Techniques of integration: integration by parts, substitution. Definite integral, Newton-Leibniz formula. Applications of integrations: area of regions, arc length of curves, volume and surface area of solids of rotation, centroid of regions. Improper integral.

Textbook: Thomas: Calculus, 11th edition, (International Edition), Addison Wesley

Budapest, September 6th, 2009

Dr. Anikó Csákány