Information sheet

ADDITIONAL EXERCISES IN MATHEMATICS II

University:	Slovak University of Technology in Bratislava
Faculty:	Faculty of Mechanical Engineering
Course unit code:	282110_BDP
Course unit title:	Additional Exercises in Mathematics II
Mode of completion and Number of ECTS credits:	Pass credit (1 credit)

Course contents:

1. **Differential equations** (lectures: 0, seminars: 3)
   a) Differential equations with separated and separable variables
   b) Linear differential equation
   c) Linear differential equation of the second order with constant coefficients

2. **Coordinate geometry in the plane** (lectures: 0, seminars: 2)
   a) Line, metric and position rrelations
   b) Conic sections, their analytic equations and views

3. **Sets of points in the plane** (lectures: 0, seminars: 1)
   a) Sets of points in the plane determined by inequalities

4. **Function with two real variables** (lectures: 0, seminars: 3)
   a) Domain of definition and graph of function with two real variables
   b) Derivative of function with one real variable and partial derivatives of function with two real variables
   c) Systems of two non-linear equations with two unknown

5. **Sets of points in plane and in space** (lectures: 0, seminars: 2)
   a) View and description of set of points in plane bounded by graphs of functions
   b) View and description of set of points in space bounded by planes and quadrastic surfaces

6. **Double and triple integrals** (lectures: 0, seminars: 2)
   a) Calculation of definite, double and triple integrals
   b) Applications of double and triple integrals – physical and geometric