

SYLLABUS

SUBJECT ELEMENTS OF LOGIC AND SET THEORY

TEACHER DR URSZULA DUDZIAK

COURSE DESCRIPTION

The sentential calculus (symbols and formulae, zero-one verification, truth functors, tautology, rules of proof construction). The functional calculus (symbols and formulae, rules of the functional calculus). General set theory (the algebra of sets, relationship between the sentential calculus and the algebra of sets, Boolean algebra, infinite operations, the Cartesian product of sets, elements of the theory of relations, equivalence relations, equinumerous sets, cardinal numbers). Ordered sets (partially ordered sets, well-ordered sets).

LEARNING OUTCOMES

The examination at the end of the semester will consist of two parts, written and oral exams.

GRADING POLICY

To pass the written exam is necessary for a student to get more than 50% of the total possible points. Students who fail the written part will still have a chance to pass the examination during the oral part.

The amount of the received points

(90% - 100%] of the total possible points corresponds to the grade 5 (A)

(80% - 90%] of the total possible points corresponds to the grade 4.5 (B)

(70% - 80%] of the total possible points corresponds to the grade 4 (C)

(60% - 70%] of the total possible points corresponds to the grade 3.5 (D)

(50% - 60%] of the total possible points corresponds to the grade 3 (E)

[0% - 50%] of the total possible points corresponds to the grade 2 (F)

TIMETABLE

Since the language of the course is English individual meetings with students will be settled each week.

TEXTBOOK AND REQUIRED MATERIALS

The main textbook.

J. Słupecki, L. Borkowski, Elements of Mathematical Logic and Set Theory, Pergamon Press, PWN-Polish Scientific Publishers, Warszawa 1967.

Additional textbooks.

H.Rasiowa, Wstęp do matematyki współczesnej, PWN, Warszawa 2003.

PREREQUISITES:

The knowledge of elementary mathematics on the level of secondary school.