



Syllabus

Preparatory math for Odyssey program part 1 - 80306

Last update 06-11-2018

HU Credits: 0

Responsible Department: Mathematics

Academic year: 0

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: E. Safra

Course/Module Coordinator: Dr. Alex Gourevich

Coordinator Email: gurevich@math.huji.ac.il

Coordinator Office Hours: by appointment

Teaching Staff:
Dr. Alex Gourevich

Course/Module description:
Topics in Math required for the University Studies

Course/Module aims:

Prepare students for studying Math at the University

Learning outcomes - On successful completion of this module, students should be able to:

Solve problems in Math

Attendance requirements(%):

85

Teaching arrangement and method of instruction: Lecture

Course/Module Content:

- *Sets, Functions, Image, Preimage*
- *Real functions, Graphs, Equations and Inequalities*
- *Odd and even functions, increasing and decreasing functions*
- *Linear and quadratic functions*
- *Injective and surjective functions, Inverse function*
- *Polynomial functions, Roots*
- *Exponential functions, Logarithmic functions*
- *Unit circle, Radian measure, Sine, Cosine*
- *Arcsine, Arccosine*
- *Tangent, Arctangent*
- *Cartesian coordinates, points, vectors*
- *Lines, parametric form, intersection point*
- *Scalar product, projections*
- *Distance between two points, distance between a point and a line*
- *Area of parallelogram, area of triangle*
- *Complex numbers, addition and multiplication*
- *Absolute value, conjugate and inverse of a complex number*
- *Polar form of a complex number, de Moivre's formula*
- *Mathematical Induction*
- *Greatest common divisor, Euclidian algorithm*

Required Reading:

No

Additional Reading Material:

No

Course/Module evaluation:

End of year written/oral examination 80 %

Presentation 0 %

Participation in Tutorials 0 %

Project work 0 %

Assignments 10 %

Reports 0 %

Research project 0 %

Quizzes 10 %

Other 0 %

Additional information:

No