



## *The Hebrew University of Jerusalem*

### *Syllabus*

## *Secrets of the human Genome - 94323*

*Last update 24-03-2014*

*HU Credits: 2*

*Degree/Cycle: 1st degree (Bachelor)*

*Responsible Department: biomedical sciences*

*Academic year: 1*

*Semester: 1st Semester*

*Teaching Languages: Hebrew , English slides*

*Campus: Mt. Scopus*

*Course/Module Coordinator: Dr. Ann Saada (Reisch)*

*Coordinator Email: [annsr@hadassah.org.il](mailto:annsr@hadassah.org.il)*

*Coordinator Office Hours: Sunday 15-16 Hadassah EK*

*Teaching Staff:*

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Dr. Ann Saada Reisch

Course/Module description:

The curriculum includes learning the basics of human genetics, the structure and expression of genes while introducing some analytical methods. The molecular basis of (some) inherited diseases will be discussed more in detail including some ethical issues. This introductory course is also intended for students with now prior acquaintance with the subject.

Course/Module aims:

To understand the basics of human genetics and the expression of genes in health and disease.

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

To know and to understand the basics of human genetics and gene expression.

Attendance requirements(%):

70%

Teaching arrangement and method of instruction: frontal lectures

Course/Module Content:

introduction to cell biology  
chromosomes  
DNA structure and replication  
gene expression  
modes of inheritance, Mendel's laws  
Cytogenetics  
Chromosomal aberrations  
Sex chromosomes  
DNA mapping and sequencing  
The molecular and biochemical basis of inherited diseases  
Multifactorial genetic diseases  
Gene and stem cell therapy

Required Reading:

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Additional Reading Material:

*Molecular biology of the cell*

*Human Molecular Genetics*

*An Introduction to Genetic Analysis*

Course/Module evaluation:

*End of year written/oral examination 0 %*

*Presentation 0 %*

*Participation in Tutorials 0 %*

*Project work 70 %*

*Assignments 0 %*

*Reports 0 %*

*Research project 0 %*

*Quizzes 30 %*

*Other 0 %*

Additional information: