



# *The Hebrew University of Jerusalem*

## *Syllabus*

### *Secrets of the human Genome - 94323*

*Last update 03-07-2016*

*HU Credits:* 2

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

*Responsible Department:* bio-medical sciences

*Academic year:* 0

*Semester:* 1st Semester

*Teaching Languages:* Hebrew

*Campus:* Mt. Scopus

*Course/Module Coordinator:* Prof. Ann Saada-Reisch

*Coordinator Email:* [anns@ekmd.huji.ac.il](mailto:anns@ekmd.huji.ac.il)

*Coordinator Office Hours:* Sun 14-16

*Teaching Staff:*

---

Dr. Avraham Shaag  
Prof Ann Saada Reisch

Course/Module description:

The understanding of human health and disease is being revised, as the secrets of the human genome are being unveiled. With the full DNA blueprint of a human individual, a new era in medicine is presented as many human conditions and diseases can now be explained by molecular genetics. The, extended knowledge is accompanied by ethical issued and concerns with respect to the use of genetic information. Nevertheless, with its advantages and disadvantages, the era of the genetic revolution has arrived.

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 no prior acquaintance with the subject- these might experience some difficulties the first lessons.

Course/Module aims:

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

Basic understanding of modern human genetics in normal and diseases states.

Attendance requirements(%):

80%

Teaching arrangement and method of instruction: frontal and one exercise and a quiz

Course/Module Content:

structure of cells chromosomes and DNA  
The central dogma  
Gene expression  
A molecular view of Mendel's laws and human inheritance  
the basis of human genetic disorders  
Molecular methods  
CSI,

---

*genetic diagnosis-prenatal-postnatal,  
gene therapy*

*Required Reading:*

*Selected parts of- Human Molecular Genetics 4th ed*

*Course slides*

*Additional Reading Material:*

*Human Molecular Genetics 4th ed*

*Molecular biology of the cell 6th ed*

*An Introduction to Genetic Analysis, 7th ed*

*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:*

*minimal grade for passing 60*

*quiz-(open) is compulsory*

*and passing is required before handing in the final assignment- "home examination"*