

The Hebrew University of Jerusalem

Syllabus

Advanced topics in data analysis and digital health - 97918

Last update 16-04-2024

<u>HU Credits:</u> 3

Degree/Cycle: 2nd degree (Master)

Responsible Department: Bio-Medical Sciences in Dentistry

<u>Academic year:</u> 0

Semester: 2nd Semester

Teaching Languages: Hebrew

<u>Campus:</u> Ein Karem

Course/Module Coordinator: Prof. Galit Almoznino

Coordinator Email: galit@almoznino.com

Coordinator Office Hours: by prior arrangement

<u>Teaching Staff:</u> Dr. ayelet goldstein, Prof Galit Almoznino, Dr. Shir Rosenbaum, Dr. Guy Kelman, Dr. EREZ SHALOM

Course/Module description:

The course presents current topics in in data analysis and digital health.

Course/Module aims:

To discuss together advanced topics in data analysis and digital health and their meaning.

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

Upon successful completion of this course student will be able to understand and discuss advanced topics in data analysis and digital health and their meaning.

<u>Attendance requirements(%):</u> 100%

Teaching arrangement and method of instruction: Lectures and student presentations.

Course/Module Content:

12-05-2024 Introduction- Study designs-advantages and disadvantages Prof. Galit Almoznino

19-05-2024 Machine learning application in medicine and cancer research Dr. Shay Rozenberg

26-05-2024 9:15-11:00 Computational Decision support systems in medicine Dr. Erez Shalom 26-05-2024 11:15-12:00 Advanced literature search Tomer Ben Shushan

02-06-2024 Big Data studies using advanced machine learning algorithms in the Jerusalem computational center Dr. Guy Kelman

09-06-2024 Artificial intelligence in medicine Dr. Ayelet Goldstein

16-06-2024 Anatomy of a study proposal Multicolinearity, Regression, simple and multivariable, ANOVA & ANCOVA, multiple comparisons, post-hoc tests, Odds Ratio as a measure of association. Prof. Galit Almoznino

23-06-2024 Big Data studies using advanced machine learning algorithms and statistical analysis Prof. Galit Almoznino

07-07-2024 Seminar and critical discussion Prof. Galit Almoznino

14-07-2024 Seminar and critical discussion Prof. Galit Almoznino

21-07-2024 Seminar and critical discussion Prof. Galit Almoznino

28-07-2024 Seminar and critical discussion- Prof. Galit Almoznino

<u>Required Reading:</u> Current literature

<u>Additional Reading Material:</u> NA

<u>Grading Scheme:</u> Presentation / Poster Presentation / Lecture/ Seminar / Pro-seminar / Research proposal 80 % Active Participation / Team Assignment 10 % Attendance / Participation in Field Excursion 10 %

<u>Additional information:</u> NA