**TIMETABLE of the lecture**

**Genetics of Human Development**

Summer semester 2023/2024

(non obligatory)

|  |  |
| --- | --- |
| **Date** | **TOPIC** |
| 6 March  **11:45 – 16:30** | **11:45-13:15**  1. Introduction to R language (dplyr library)  2. Simple data plots: scatterplot, boxplot and (ggplot2 library**)**  **Dr hab. Tomasz Górecki, prof. UAM** |
| 6 March  **11:45 – 16:30** | **13:30 – 15:00**  1. Descriptive statistics: mean, median, mode, variance, standard deviation, standard error 2. Statistical tests – introduction  **Dr hab. Tomasz Górecki, prof. UAM** |
| 20 March  **15:00 – 16:30** | **15:00 – 16:30**  Introduction to Systems Biology  **Dr Marcin Sajek** |
| 13 March  **10:00 – 15:00** | **10:00 – 11:30**  1. Goodness of fit tests: exact test, test chi2 and test G 2. Comparison of two populations: – t test for independent and dependent samples. Wilcoxon test  **Dr hab. Tomasz Górecki, prof. UAM** |
| **11:45 – 13:15**  1. Assumptions in statistical tests: normality, homoscedasticity of variance – Box-Cox method 2. Comparison of multiple samples – one-way and multiway analysis of variance (ANOVA). Kruskal-Wallis test and Friedman test. Post-hoc comparison  **Dr hab. Tomasz Górecki, prof. UAM** |
| **13:30 – 15:00**  Independence tests. Mosaic plot, balloon plot and association plot  **Dr hab. Tomasz Górecki, prof. UAM** |
| 3 April  **10:00 -15:00** | **10:00 – 11:30**  Pearson and Spearman coefficient of correlation. Application of scatterplot and sunflower plot to correlation analysis  **Dr hab. Tomasz Górecki, prof. UAM** |
| **11:45 – 13:15**  Simple regression. Multiple regression  **Dr hab. Tomasz Górecki, prof. UAM** |
| **13:30 – 15:00**  BioconductoR  **Dr hab. Tomasz Górecki, prof. UAM** |