

TIMETABLE of the lecture**Systems Biology**Summer semester 2019/2020
(non obligatory)

20.02.2020 (Thursday)	9:00 – 10:30	Introduction to Systems Biology	Dr Marcin Sajek
	11:00 – 12:30	1. Introduction to R language (dplyr library) 2. Simple data plots: scatterplot, boxplot and (ggplot2 library)	dr hab. Tomasz Górecki UAM
	12:45 – 14:15	3. Descriptive statistics: mean, median, mode, variance, standard deviation, standard error 4. Statistical tests – introduction	dr hab. Tomasz Górecki UAM
21.02.2020 (Friday)	9:00 – 10:30	5. Goodness of fit tests: exact test, test chi2 and test G 6. Comparison of two populations: – t test for independent and dependent samples. Wilcoxon test	dr hab. Tomasz Górecki UAM
	11:00 – 12:30	7. Assumptions in statistical tests: normality, homoscedasticity of variance – Box-Cox method 8. 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 UAM
	12:45 – 14:15	9. Independence tests. Mosaic plot, balloon plot and association plot	dr hab. Tomasz Górecki UAM
12.03.2020 (Thursday)	9:00 – 10:30	10. Pearson and Spearman coefficient of correlation. Application of scatterplot and sunflower plot to correlation analysis	dr hab. Tomasz Górecki UAM
	11:00 – 12:30	11. Simple regression. Multiple regression	dr hab. Tomasz Górecki UAM
	12:45 – 14:15	12. Bioconductor	dr hab. Tomasz Górecki UAM