

## **Schedule**

### **Real Time Quantitative PCR – theory, experimental design and data analysis**

#### **3.5 ECTS, PNS0215**

The course runs from April 15<sup>th</sup> to April 30<sup>th</sup> and is built around seven teaching sessions and five homework assignments. Teaching sessions are conducted via zoom and will represent a mix of recapitulations of recent homeworks, lectures and group discussions/exercises. Homework assignments are carried out in groups of 2-3 persons. Most homework assignments are based on example genes and example data sets, but in the optional assignment 5 and zoom session 7 students are encouraged to plan and discuss qPCR experiments for their favorite gene/s. All other teaching sessions and homework assignments are compulsory. For further details, see the course schedule below.

April 15, 9.15-12:	Zoom session 1: PCR (student introduction + lecture + group exercise)
April 15, afternoon:	Homework 1: Plan PCR for given gene (template prep. + primer design + PCR program)
April 16, whole day:	Homework 1, continued
April 19, 10-12:	Zoom session 2: qPCR basics, MIQE guidelines, relative vs absolute qPCR (sum-up homework 1 + lecture + group exercise)
April 19, 13-14:	Zoom session 2, continued
April 19, afternoon:	Homework 2: Plan multiplex qPCR, absolute qPCR and relative qPCR
April 20, whole day:	Homework 2, continued
April 21, 9.15-12:	Zoom session 3: Primer design & reference genes (sum-up homework 2 + lecture + group exercise)
April 21, afternoon:	Homework 3: Design CFX manager-based layout for qPCRs planned in homework 2.
April 22, whole day:	Homework 3, continued.
April 23, 9.15-12:	Zoom session 4: NGS & Microarrays vs qPCR (sum-up homework 3 + lectures)
April 23, afternoon:	Homework 4: qPCR data analysis, preparation of figure, results and Materials & methods for a publication
April 26, 10-12:	Zoom session 5: Remaining questions (discussion about homework 4, questions from previous sessions revisited)
April 26, 13-14:	Zoom session 5, continued.
April 26, afternoon:	Homework 4, continued.
April 27, whole day:	Homework 4, continued.
April 28, 9.15-12:	Zoom session 6: Students presentations (10' presentation of how experiments would be presented in a publication + 5' discussion per group)
April 28, afternoon:	Homework 5 (OPTIONAL): Plan qPCR for your favorite gene/s
April 29, whole day:	Homework 5, continued (OPTIONAL).
April 30, 9.15-12:	Zoom session 7 (OPTIONAL): Discussion about homework 5