

# PNS0215 Real Time Quantitative PCR – theory, experimental design and data analysis, 3.5 Credits

## Syllabus approved

2021-01-25

## Subjects

Biology

## Grading scale

Pass / Failed The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

## Language

Swedish

## Prior knowledge

The course is intended for PhD students within the SLU Graduate School Organism Biology, but is open for all interested SLU PhD students. Other SLU staff and PhD students from other universities are welcomed if space allows.

## Objectives

After the course students will be able to decide wisely whether qPCR is the best method to address a given problem, design a qPCR experiment following MIQE guidelines for scientific publications of qPCR data, analyse the data and write it up for a publication.

## Content

The course includes a strong theoretical background in qPCR and practically-oriented modules on the design of qPCR experiments and the analysis and presentation of qPCR data. Students will have an opportunity to learn about practical application of the qPCR method in the context of other existing techniques (NGS, Microarrays). Teaching is in the form of lectures and group works. Modules dealing with experimental design and data analysis will focus on example genes and example qPCR data sets. The course does not include wet lab work.

## Additional information

The course is organized by Alyona Minina (Department of Molecular Sciences, NJ faculty) on behalf of the SLU Organism Biology research school. The entire course will be conducted remotely via Zoom. For the practical part students will be provided raw data for analysis. Additionally, students will be encouraged to look into genes of their interest and try analysis on their data, if such exists. Analysis of student's personal data will then be discussed at the last optional session. Maximum 16 students per course occasion.

## Responsible department

Department of Plant Biology