



- 5 Define basic concepts in microbial ecology, such as carrying capacity, succession, r- and K-selection, ecological niches
- 6 Outline the principles of methods for quantification of organic carbon in wastewater and calculate the theoretical oxygen demand (ThOD) for simple organic compounds
- 7 Explain the microbial processes and growth requirements underlying the activated sludge process, nitrification, denitrification, enhanced phosphorus removal, and anaerobic digestion
- 8 Evaluate alternative process schemes for combined biological nutrient removal (BNR)
- 9 Describe the most commonly applied disinfection methods, and the steps typically involved in drinking water treatment process train
- 10 Evaluate the potential for biodegradation of organic pollutants, taking microbial and physical/chemical environments, as well as the chemical structure of the compound itself, into consideration

**Conditions for credit contract**

This course unit cannot be taken via a credit contract

**Conditions for exam contract**

This course unit cannot be taken via an exam contract

**Teaching methods**

Lecture, Practical

**Learning materials and price**

*Course material is specified at the beginning of the course.*

**References**

Publications and books/chapters made available

**Course content-related study coaching**

*PhD students acts as practical course advisers, support from a permanently employed engineer, guiding upon request, student advice on agreement*

**Assessment moments**

continuous assessment

**Examination methods in case of periodic assessment during the first examination period**

**Examination methods in case of periodic assessment during the second examination period**

**Examination methods in case of permanent assessment**

Oral assessment, Written assessment, Assignment

**Possibilities of retake in case of permanent assessment**

examination during the second examination period is possible

**Extra information on the examination methods**

*The exam may be oral or written, announced in advance.*

**Calculation of the examination mark**

The course will have an assessment with standard NTNU grades A-F

*Students who eschew period aligned and/or non-period aligned evaluations for this course unit may be failed by the examiner.*