

Education

AnoxKaldnes™ Services

ANOXKALDNES



Four day intensive course covering:

- The microbial groups
- What bacteria need to grow
- Microorganisms working in groups
- Microbial processes
- Activated sludge processes
- Biofilm processes
- Combinations of biological processes
- Anaerobic processes
- Laboratory testing
- Diagnostic microscopy
- Biological nutrient removal
- Nutrient dosage in the industry
- Pathogenic microorganisms

This course has been held annually in Lund since 1992, usually in Swedish. An English version is also available.

Special courses

AnoxKaldnes offer tailor-made courses, either for treatment plant personnel or for a group of customers.

Training courses

Training of personnel in applied microbiology and biological processes is an important part of our service for full-scale installations.

Microbial design

The microbes are always in focus when AnoxKaldnes designs a biological wastewater treatment process.

But to be able to really connect microbiology with technology, a second phase begins when the new treatment plant is completed.

Now microbial knowledge has to be transferred from AnoxKaldnes to the treatment plant's personnel. The ultimate goal is to bring "microbiological eyes" to everyone. When you perceive the biological process as the bacteria do, you are fully trained!

AnoxKaldnes also offers general courses in the microbiology of wastewater treatment. These courses are open for everyone working with biological processes in municipal or industrial treatment plants.

Special courses can be given in any field of biological wastewater treatment. Courses in suspended biofilm processes, anaerobic processes, biological phosphorus and nitrogen removal, biological trouble-shooting, diagnostic microscopy, and filament identification have been held.



Overview of four-day course

- **Eight groups of microorganisms**

- Bacteria, archaea, fungi, algae, protozoans, metazoans, virus and prions. What influence do they have on biological treatment processes?

- **Bacterial needs**

- Energy, organics, nutrients, salts, pH, temperature, oxygen, and other growth factors.

- **Microorganisms in groups**

- Microbial cooperation results in complex transformations that are important in biological treatment processes.

- **Microbial processes**

- The application of microbial processes in biological treatment and the cycling of carbon, sulfur, nitrogen, and phosphorus.

- **Activated sludge processes**

- The activated sludge process was invented in 1914 but is still evolving as a technology. Today there are many ways to operate the process.

- **Biofilm processes**

- From trickling filters to suspended biofilm processes. How are they operated and how do they match up to the activated sludge process?

- **Combination processes**

- The combination of different biological processes has gained a growing interest. What can be achieved and what are the limits?

- **Anaerobic processes**

- Anaerobic treatment of wastewaters and solids.

- **Nutrients in biological treatment**

- Biological nitrogen and phosphorus removal in municipal plants and optimal nutrient dosage in certain industrial plants.

- **Laboratory tests**

- How can degradation tests, inhibition assays, toxicity testing and molecular biology contribute to process optimization?

- **Diagnostic microscopy**

- The use of a phase-contrast microscope for assessment of sludge/biofilm quality and for trouble-shooting. Identification of filamentous bacteria.

- **Pathogenic microorganisms**

- Bacteria, virus, endotoxins, and parasites. What and where are the dangers, if any?

