

The Biogas Process

Fristående- och programkurs

7.5 hp

The Biogas Process

744A07

Gäller från:

Fastställd av

Fastställandedatum

2008-04-16

Huvudområde

Inget huvudområde

Utbildningsnivå

Avancerad nivå

Fördjupningsnivå

A1X

Förkunskapskrav

Documented knowledge of English equivalent to “Engelska B” is required, or an international proficiency test, e.g. TOEFL, minimum score 550/213”. To be eligible to the course the student must, except the general entrance requirements have fulfilled 120 ECTS whereof at least 90 ECTS in chemistry/biology/environmental science or equivalent.

Lärandemål

The student should acquire knowledge and practical attainments in anaerobic microbiology and process designs applied to different substrates for use in biogas processes. It also includes the implementation and control means of the process. Logistic and economical aspects of the applied biogas process will also be discussed.

Kursinnehåll

The course contains a theoretical and a practical part. The microbiology of the biogas process as ruled by the used substrate is first treated on a theoretical level. Planning and construction of biogas plants for different applications including control systems and logistics regarding substrate supply and treatment of the fermented residue as well as hygienic, system energetic and economical and environmentally related aspects are also important parts of the theoretical course-part. The practical part of the course involves different kinds of lab-scale reactors which will be used to exemplify the biogas potential, kinetics and hydraulic retention times related to different substrates.

Undervisnings- och arbetsformer

The course is based on lectures and practical exercises using lab-scale bioreactors. In addition education visits, including some practical work to a number of biogas plants will be performed.

Betygsskala

Tregradig skala, U, G, VG

Övrig information

Planering och genomförande av kurs skall utgå från kursplanens formuleringar. Den kursvärdering som skall ingå i varje kurs skall därför behandla frågan om hur kursen överensstämmer med kursplanen. Kursen bedrivs på ett sådant sätt att både mäns och kvinnors erfarenhet och kunskaper synliggörs och utvecklas.

Institution

Institutionen för Tema