Training Opportunities in Anaerobic Digestion
An anaerobic digester is designed to process a feedstock of defined quality, produce a biogas of specific quality and volume, plus a digestate with known characteristics. In reality the feedstock received will be different to that designed for and there will be a number of bottlenecks on the site that affect throughput, revenue generation and digestate quality. It’s up to the Operations team to manage the performance of the site to meet business objectives. This can only be achieved with well trained staff that understand anaerobic digestion and the factors that influence operating costs and revenue. AD training will help the site to understand, set and achieve key performance indicators. In addition to the tangible savings and income generation that training can deliver it can also be employed as an enabler: for organisational or procedural change; to motivate staff; to improve employee retention; and increase the organisation’s intellectual capital.

We have developed a range of training courses specifically aimed at those operating anaerobic digestion facilities. Our trainers have real, on-site experience which enables them to give practical guidance on how to best operate an AD plant to improve optimisation and efficiency.

We also offer a bespoke training service with programme content modified to include the specifics of your AD plant, including layout, design criteria and operating data. Our trainers will work with you to build a course programme that addresses any operating issues you may have, enabling you to improve the efficiency of your AD plant.

Bespoke AD Training Delivered to Scottish Water: June 2015

“The feedback I have received from attendees has all been positive, I think this was because the course content was based on Scottish Water’s improvement plans. Nigel and Matthew were very good trainers and kept the day moving on, but were informal in their approach, which was appreciated.”

Joanne Whittington, Sludge Financial Outperformance Planning Team, Scottish Water

Source: Organic Waste Systems NV

Why Invest in AD training?

- Gain a full understanding of the digestion process and ensure your digester is operating efficiently
- Understand industry accepted KPIs for your digester and learn how to use them in your own digester operation
- Optimise the energy production from your digester
- Enhance the value of your digestate

www.aquaenviro.co.uk
Courses we offer

Operating Anaerobic Digestors to Optimise Energy Recovery:
Waste Primary and Secondary Sludge
16th March 2016, Aqua Enviro Training Suite, Wakefield

A specialised day of training for those working with anaerobic digestion treating water and wastewater.

Course content:
- Understanding the digestion process
- Digester operation
- Digester foaming
- Feeding, mixing and heating
- Digester biogas
- Dewatering the digestate and handling the dewatering liquor treatment
- Advanced digestion

"The course was very good I’ve taken quite a bit away with me to think about; both Nigel and Matt’s presentations were excellent."

Commercial Contracts Manager, Scottish Water Horizons

Operating Anaerobic Digesters to Optimise Energy Recovery:
Solid Organic Wastes
17th March 2016, Aqua Enviro Training Suite, Wakefield

A course specially developed for those working in anaerobic digestion treating solid organic wastes.

Course content:
- Process Biochemistry for design and operation
- Assessing the value of organic waste feedstock
- Reactor kinetics for selecting HRT and OLR
- Digester size, shape, mixing and heating
- Calculating net energy yields and process energy balance
- Optimising the biogas yield
- Options for digestate handling and recycling

"Just a note regarding the digestion training Nigel and Matt delivered yesterday which I thought was excellent – both are really good presenters and I’ll recommend this to other members in my process team and operators on digestion sites in future."

Wastewater and Quality - Process Advisor, Severn Trent Water
Courses we offer

**Simple Statistics Techniques for Operators of Anaerobic Digestion Facilities**  
26th January 2016, Aqua Enviro Training Suite, Wakefield

This training course has been developed in association with Newcastle University and designed for those working with anaerobic digestion plants. It aims to improve the statistical skills of delegates, allowing them to analyse the information that is currently gathered in routine plant operation and use this to operate AD plants more efficiently.

Course content:
- How to gather and use performance data from an AD plant
- Statistical techniques to analyse and improve performance
- Methods of displaying data to help understand performance data
- Using statistical techniques to improve AD plant management

**Intermediate Statistical Techniques for Operators of AD Facilities**  
27th January 2016, Aqua Enviro Training Suite, Wakefield

Ready for the higher level?

Developed in association with Newcastle University and Cockle Park Anaerobic Digestion Plant. This course offers specific training at a higher level than the previous course "Simple Statistical Techniques for Operators of Anaerobic Digestion Facilities" further developing delegates skills to analyse the information gathered in routine plant operation and use this to operate AD plants more efficiently.

Course content:
- Time Series Based Regression Analysis
- Further Statistical Techniques to analyse and improve performance
- Real Time data monitoring using data from Cockle Park Anaerobic Digestion Plant

www.aquaenviro.co.uk
Trainers

Our expert trainers have real, on-site experience which enables them to give practical guidance on how to best operate an AD plant to improve optimisation and efficiency. They deliver a regular series of AD courses at our dedicated events suite in Wakefield and also develop bespoke in-house courses to suit individual needs and budgets.

Dr Nigel Horan: BSc, MSc, PhD, FCIWEM, C.Sci, C.Env, MIWet.
Chairman, Aqua Enviro Limited and Reader in Public Health Engineering, School of Civil Engineering, University of Leeds.

Nigel is a leading researcher in the fields of environmental engineering and micro-biology. He has worked on anaerobic digestion contracts to the value of £45 million and has published 8 technical papers on anaerobic digestion in the last two years.

Matthew Smyth: BSc (Hons), MRes, MBA, CSci., CIWEM, MCIWEM
Operations’ Director, Aqua Enviro Limited

Matt specialises in optimising AD plants and failing digesters. Matt presents regularly at conferences on both activated sludge and anaerobic digestion. Over the past 5 years he has trained over 200 professionals in these areas.

Matthew Linsley, CStat, MMathStats
General Manager of ISRU, University of Newcastle

Matt joined the unit in 1999 after graduating from the School of Mathematics and Statistics with a Masters in Mathematics and Statistics. He has worked for business and industrial clients within the manufacturing, service and healthcare sectors, finding innovative solutions to practical problems. He has nearly 10 years experience in outreach including consultancy, organisation development, training, and placement student supervision.

Course Costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 delegate/course</td>
<td>£350</td>
</tr>
<tr>
<td>2 delegates/courses</td>
<td>£320 each</td>
</tr>
<tr>
<td>3 or more delegates/courses</td>
<td>£300 each</td>
</tr>
</tbody>
</table>

All prices are excluding VAT.

Venue and Location

All courses are held at the Aqua Enviro dedicated events suite located in Wakefield.

Our training facility also has a dedicated laboratory enabling our delegates to see first-hand many of the microbial and biochemical concepts covered in some of our technical courses.

Full directions will be sent to delegates upon registration.

How to Register

You can register online at [www.aquaenviro.co.uk](http://www.aquaenviro.co.uk) or email clarehunter@aquaenviro.co.uk for a booking form.