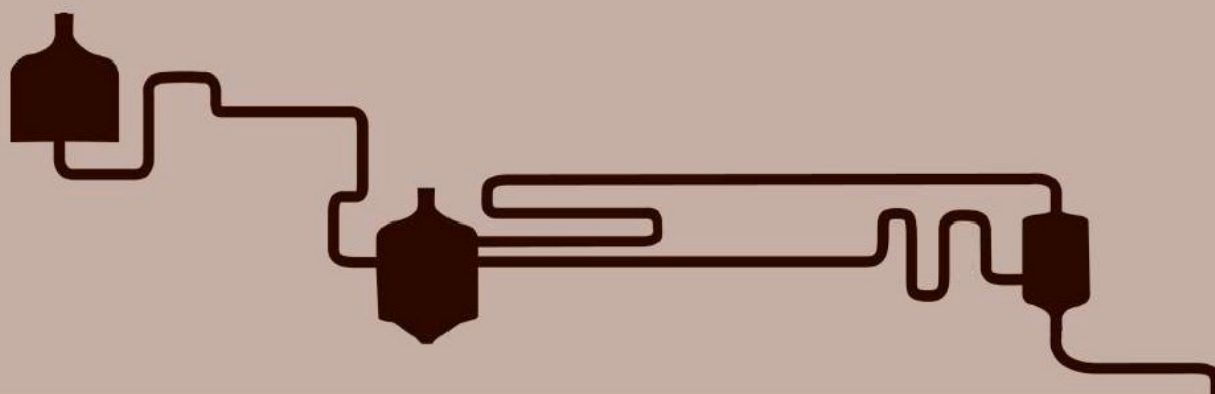


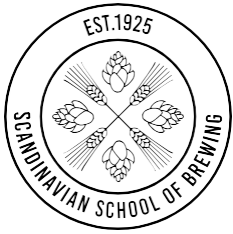


# ACTIVITY CATALOGUE



**SCANDINAVIAN SCHOOL OF BREWING**  
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# Table of Contents

<b>Education</b>	
Diploma Master Brewer (DMB).....	1
- Module 1, Raw Materials.....	2
- Module 2, Brewhouse.....	3
- Module 3, Fermentation.....	4
- Module 4, Beer Processing.....	5
- Module 5, Packaging.....	6
- Module 6, Utilities.....	7
- Certified Brewmaster.....	8
- Certified Brewmaster.....	9
Diploma Craft Brewer.....	10
<b>Courses</b>	
Beer Brewing Basics.....	11
Troubleshooting.....	12
Beer Flavour Evaluation.....	13
Describe Your Beer.....	14
Cider Making.....	15
Soft Drinks Technology.....	16
Executive Course.....	17
<b>Seminars</b>	
Hops Tour.....	18

# DIPLOMA MASTER BREWER

The Scandinavian School of Brewing education programme for Diploma Master Brewer (DMB) is the most in-depth and scientific based education we offer. The Master Brewer programme consists of six modules and forms a part of the master specialisation in <sup>1</sup>Brewing Science and Technology at Faculty of Science at University of Copenhagen. Students from the industry can take each module individually by applying directly to the Scandinavian School of Brewing, who is managing the education at University of Copenhagen. For further details, please see the separate descriptions. The six modules are:

1. Raw Materials - 2 weeks
2. Brewhouse - 3 weeks
3. Fermentation - 3 weeks
4. Beer Processing - 2 weeks
5. Packaging - 3½ weeks
6. Utilities - 2½ weeks

## WHO WILL BENEFIT FROM THIS COURSE?

Technical staff from the brewing and beverage industry or related supplier/service organisations.

## WHAT IS REQUIRED?

We require a B.Sc. or M.Sc. in food science, chemical engineering, pharmacy, chemistry, biology, biotechnology or similar qualification.

## WHEN AND WHERE?

See calendar on [www.brewingschool.dk](http://www.brewingschool.dk)

The venue is University of Copenhagen. Frederiksberg Campus.

## COURSE FEE & CANCELLATION

See calendar. For cancellation later than 14 days before, we charge full course fee. Accommodation is not included.

## REGISTRATION

Please complete the application form at [www.brewingschool.dk](http://www.brewingschool.dk)



# MODULE 1, RAW MATERIALS

Students from the industry can take each of the six modules individually by applying directly to the Scandinavian School of Brewing, who is managing the education at University of Copenhagen.

This module focusses on the raw materials of the brewing process: barley, hops, water and adjuncts, together with the processes that these materials undergo prior to brewing. Therefore, the malting process, along with the biochemistry behind the raw materials, are thoroughly covered throughout this module. The teaching is conducted in English.

## WHO WILL BENEFIT FROM THIS COURSE?

Technical staff from the brewing and beverage industry or related supplier/service organisations.

## WHAT IS REQUIRED?

We require a B.Sc. or M.Sc. in food science, chemical engineering, pharmacy, chemistry, biology, biotechnology or similar qualification.

## WHEN AND WHERE?

See calendar on [www.brewingschool.dk](http://www.brewingschool.dk)

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# MODULE 2, BREWHOUSE

Students from the industry can take each of the six modules individually by applying directly to the Scandinavian School of Brewing, who is managing the education at University of Copenhagen.

In this module the all the processes from the intake of raw materials to wort cooling is covered, these subjects include milling, mashing, lautering/mash filtration, wort boiling, clarification and cooling. Both theoretical and practical approaches are used during the module to ensure that the students get the best possible outcome. By both understanding the equipment used in the brewhouse along with the knowledge of the biochemistry of the processes, to ensure the highest quality during the brewing process. The teaching is conducted in English.

## WHO WILL BENEFIT FROM THIS COURSE?

Technical staff from the brewing and beverage industry or related supplier/service organisations.

## WHAT IS REQUIRED?

We require a B.Sc. or M.Sc. in food science, chemical engineering, pharmacy, chemistry, biology, biotechnology or similar qualification.

## WHEN AND WHERE?

See calendar on [www.brewingschool.dk](http://www.brewingschool.dk)

The venue is University of Copenhagen. Frederiksberg Campus

## COURSE FEE & CANCELLATION

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# MODULE 3, FERMENTATION

Students from the industry can take each of the six modules individually by applying directly to the Scandinavian School of Brewing, who is managing the education at University of Copenhagen.

The fermentation is a vital part of any brewing process, and throughout this module, every aspect of the fermentation process is covered. Giving the students in-depth knowledge and understanding of the yeast, on everything from taxonomy, breeding, metabolism, general handling, propagation, fermentation and maturation. This module also includes practical laboratory exercises, to teach the analytical tools that can be applied to ensure a proper fermentation, and how to combat problems and infections. The teaching is conducted in English.

## WHO WILL BENEFIT FROM THIS COURSE?

Technical staff from the brewing and beverage industry or related supplier/service organisations.

## WHAT IS REQUIRED?

We require a B.Sc. or M.Sc. in food science, chemical engineering, pharmacy, chemistry, biology, biotechnology or similar qualification.

## WHEN AND WHERE?

See calendar on [www.brewingschool.dk](http://www.brewingschool.dk)

The venue is University of Copenhagen. Frederiksberg Campus

## COURSE FEE & CANCELLATION

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## REGISTRATION

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# MODULE 4, BEER PROCESSING

Students from the industry can take each of the six modules individually by applying directly to the Scandinavian School of Brewing, who is managing the education at University of Copenhagen.

After fermentation the beer is processed in many ways prior to being packaged, this module covers all of the processes that the beer could be subjected to, in order to ensure a long shelf life and achieving the desired levels of flavour stability. The subjects covers the different types of filtration used in the brewing industry, along the different stabilising methods to achieve chemical and biological stability of the product. The teaching is conducted in English.

## WHO WILL BENEFIT FROM THIS COURSE?

Technical staff from the brewing and beverage industry or related supplier/service organisations.

## WHAT IS REQUIRED?

We require a B.Sc. or M.Sc. in food science, chemical engineering, pharmacy, chemistry, biology, biotechnology or similar qualification.

## WHEN AND WHERE?

See calendar on [www.brewingschool.dk](http://www.brewingschool.dk)

The venue is University of Copenhagen. Frederiksberg Campus

## COURSE FEE & CANCELLATION

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## REGISTRATION

Please complete the application form at [www.brewingschool.dk](http://www.brewingschool.dk)



# MODULE 5, PACKAGING

Students from the industry can take each of the six modules individually by applying directly to the Scandinavian School of Brewing, who is managing the education at University of Copenhagen.

In this module the processes of filling in to different containers; bottles, cans, kegs etc., will be covered. Along with the production, filling, labelling, packaging of these containers. Every machine used in packaging of the products will covered in-depth, but also the conveyors binding these machines together will part of this module. Thorough theoretical calculations will be used to properly understand the dimensioning of the packaging lines. The teaching is conducted in English.

## WHO WILL BENEFIT FROM THIS COURSE?

Technical staff from the brewing and beverage industry or related supplier/service organisations.

## WHAT IS REQUIRED?

We require a B.Sc. or M.Sc. in food science, chemical engineering, pharmacy, chemistry, biology, biotechnology or similar qualification.

## WHEN AND WHERE?

See calendar on [www.brewingschool.dk](http://www.brewingschool.dk)

The venue is University of Copenhagen. Frederiksberg Campus

## COURSE FEE & CANCELLATION

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## REGISTRATION

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# MODULE 6, UTILITIES

Students from the industry can take each of the six modules individually by applying directly to the Scandinavian School of Brewing, who is managing the education at University of Copenhagen.

In order for the brewery to be running, there is a constant demand for the different utilities: heating, cooling, electricity, compressed air, CO<sub>2</sub>-recovery etc. This module will give a good insight into how these utilities are produced and supplied throughout the brewery. As breweries generate significant amounts of different waste materials and wastewater, the handling and possibilities of these will be covered. General process control throughout the entire plant, along with decisions behind planning and designing a new brewery is also part of the curriculum. The teaching is conducted in English.

## WHO WILL BENEFIT FROM THIS COURSE?

Technical staff from the brewing and beverage industry or related supplier/service organisations.

## WHAT IS REQUIRED?

We require a B.Sc. or M.Sc. in food science, chemical engineering, pharmacy, chemistry, biology, biotechnology or similar qualification.

## WHEN AND WHERE?

See calendar on [www.brewingschool.dk](http://www.brewingschool.dk)

The venue is University of Copenhagen. Frederiksberg Campus

## COURSE FEE & CANCELLATION

See calendar. For cancellation later than 14 days before, we charge full course fee. Accommodation is not included.

## REGISTRATION

Please complete the application form at [www.brewingschool.dk](http://www.brewingschool.dk)



# CERTIFIED BREWMASTER

Craft brewing in larger or smaller scale has become very popular in many parts of the World. In this education, we train coming and present microbrewers the complete process from the raw materials barley, malt, hops, water and yeast into the finished beer - filtered or unfiltered. Cleaning, legislation, product development, calculations, taste testing, microscopy and bottling are subjects covered by specialists, who know the microbrewer profession. We will visit microbreweries to support the theory. As a part of the education, you will make an individual project based on a specific problem in your own brewery ending with a report and an oral presentation. The teaching is conducted in English, but the project report can be in Scandinavian or English.

A Certified Brewmaster is a brewery operations manager capable of:

- Organise production from raw materials to warehouse
- Work closely with QA, planning, utilities, finance, HR
- Undertake technical management
- Understand and lead own company business
- Take part in development of best practices
- Organise training of operations at operator level
- Improve processes (Quality, cost, time)
- Develop new beverages (Innovation)
- Take part in plant development tasks
- Follow agreed process standards

The mandatory part consists of five modules:

- Raw Materials & Brewhouse, 1 week
- Fermentation & Beer Processing, 2 weeks
- Packaging, 2 weeks
- Hygiene, Quality Control & CIP, 1 week
- Utilities & Maintenance, 1 week

Each module will be concluded with an examination

Elective courses, 1 week: Choose between and mix our various courses or contact us, if you can't find what you are looking for.

- **Business Economy – 2 days**
- **Grow Smart - 3 days**
- **People Management – 2 days**
- **Supply Chain – 2 days**
- **Trouble Shooting – 2 days**
- **Soft Drinks - 1 week**
- **Cider Making - 3 days**
- **Describe your beer - 2 days**
- **Beer flavour - 1 day**



# CERTIFIED BREWMASTER

Employment for a Certified Brewmaster

- Production - from "Youngbrewer" to Production Director
- HQ staff in large brewing groups
- Pharmaceutical industry
- Consultancy Companies
- QA and laboratory
- Contractors and suppliers
- Education and training
- Self-employed microbrewer or consultant

## WHO WILL BENEFIT?

Diploma craft brewers as well as technical staff from the brewing and beverage industry or correlated supplier /service organisations.

## WHAT IS REQUIRED?

This education requires as a precondition the Diploma Craft Brewer or similar and 6 months of practical work in a brewery.

## WHEN AND WHERE?

The education takes place at the Scandinavian School of Brewing in Copenhagen. See Calendar. Regarding elective courses have a look at our web page [www.brewingschool.dk](http://www.brewingschool.dk)

## COURSE FEE & CANCELLATION

Prices are incl. lunch but excl. accommodation, there are no VAT to be paid. For cancellation later than 14 days before, we charge full course fee. See Calendar.

## REGISTRATION

Please complete the application form or [www.brewingschool.dk](http://www.brewingschool.dk)



# DIPLOMA CRAFT BREWER

Craft brewing in larger or smaller scale has become very popular in many parts of the World. In this education, we train coming and present microbrewers the complete process from the raw materials barley, malt, hops, water and yeast into the finished beer - filtered or unfiltered. Cleaning, legislation, product development, calculations, taste testing, microscopy and bottling are subjects covered by specialists, who know the microbrewer profession. We will visit microbreweries to support the theory. As a part of the education, you will make an individual project based on a specific problem in your own brewery ending with a report and an oral presentation. The teaching is conducted in English, but the project report can be in Scandinavian or English.

## WHO WILL BENEFIT FROM THIS COURSE?

Microbrewers and beer enthusiasts, who are dreaming of starting their own microbrewery. The Diploma Craft Brewer qualification is recognized internationally and you can become a member of "Danish Master Brewers Association".

## WHAT IS REQUIRED?

We require two months of practical brewing experience e.g. from a microbrewery as well as English skills.

## WHEN AND WHERE?

The education takes place at the Scandinavian School of Brewing in Copenhagen. See Calendar.

## COURSE FEE & CANCELLATION

25% VAT and prices are incl. lunch, but excl. accommodation, there are no VAT to be paid. For cancellation later than 14 days before, we charge full course fee. See Calendar.

## REGISTRATION

Please complete the application form or [www.brewingschool.dk](http://www.brewingschool.dk)



# BEER BREWING BASICS

Brewing of beer is more complex than most people realise. In this course, we will introduce you to brewing raw materials and beer brewing. During the course, we look at technology throughout the brewery, and we visit a brewery and make team exercises. Expect an intense course where you will get an understanding of the brewing process, including its many technical terms such as barley, malting, hops, water, brewhouse technology, brewer's yeast, microorganisms, fermentation, maturation, stabilisation, filtration, packaging technology, taste testing, beer styles, beer and health.

## WHO WILL BENEFIT?

People from the brewing and beverage industry or related supplier/service organisations as well as beer enthusiasts, beer journalists, beer bloggers, home brewers and others with a keen interest in beer brewing.

## WHAT IS REQUIRED?

We require no technical background from brewing.

## WHEN AND WHERE?

Three days at SSB in Copenhagen. Please see Calendar.

## COURSE FEE & CANCELLATION

Prices are incl. lunch, but excl. 25% VAT and accommodation. For cancellation later than 14 days before, we charge full course fee. See Calendar.

## REGISTRATION

Please complete the application form at [www.brewingschool.dk](http://www.brewingschool.dk)



# TROUBLESHOOTING

Beer brewing often gives rise to problems of different kinds. The quality might not fulfil the specification or the production capacity is not as high as expected. In this course, we will introduce some general tools for solving of problems and go through some specific cases of troubleshooting. Examples of the general tools are Why-Why, Ishikawa, Prioritisation, Gant Chart and Pareto Analysis. We provide examples of more specific troubleshooting cases within microbiological and technical problems.

## WHO WILL BENEFIT?

Technical staff and people in quality assurance from the brewing and beverage industry or related supplier/service organisations. People from large as well as small breweries and microbreweries can benefit.

## WHAT IS REQUIRED?

We require a basic knowledge in beer brewing. You can bring your own cases, if you want to share with the other participants.

## WHEN AND WHERE?

Two days at SSB in Copenhagen. Please see Calendar.

## COURSE FEE & CANCELLATION

Prices are incl. lunch, but excl. 25% VAT and accommodation. For cancellation later than 14 days before, we charge full course fee. See Calendar.

## REGISTRATION

Please complete the application form at [www.brewingschool.dk](http://www.brewingschool.dk)





# BEER FLAVOUR EVALUATION

Researchers have identified several hundred different flavours in beer. In this course, we learn how to identify and describe some of the most common of these beer flavours. We will include positive as well as negative characters. We will demonstrate samples of various beers and flavours, and the participant will acquire first hand knowledge of flavour evaluation of beer. The course will include:

- Recognition Tests, learn to recognise and name important beer flavours
- True/False Test, to consolidate learning of the flavours
- Stop/Go Test, to apply learning to evaluate the market acceptability of packaged beer.

We will conclude the day by running a validation test, and successful participants will receive certificate documenting successful recognition of the presented flavours.

## WHO WILL BENEFIT FROM THIS COURSE?

People involved in production and product development in breweries as well as beer judges, beer enthusiasts, beer journalists, beer bloggers, home brewers and others with interest in beer flavours.

## WHAT IS REQUIRED?

We recommend a basic knowledge of beer production, but it is not required. We suggest that you leave your car at home.

## WHEN AND WHERE?

The course is held at SSB in Copenhagen. Please see Calendar.

## COURSE FEE & CANCELLATION

Prices are incl. lunch, but excl. 25% VAT and accommodation. For cancellation later than 14 days before, we charge full course fee. Please See Calendar.

## REGISTRATION

Please complete the application form at [www.brewingschool.dk](http://www.brewingschool.dk)



# DESCRIBE YOUR BEER

Some find it challenging to convey the aroma, taste and mouth feel of a certain beer. This course improves your ability to describe the sensation of beer at advanced level. We will introduce a beer language, which has been developed by beer lovers in collaboration with the Danish beer industry. With your new vocabulary for greater beer experiences, you will be able to describe the aroma; taste- and mouth feel of the beer. The language may be applied when assessing the general quality of a beer or describe a yet unknown product. You will also get an insight into the processes and raw materials which may have an influence on the final beer and learn how to use this in your work. There is no exam but a concluding test in recognition of the general sensory perceptions.

## WHO WILL BENEFIT?

People involved in production and product development in breweries as well as beer judges, beer enthusiasts, beer journalists, beer bloggers, home brewers and others engaged with development, description and marketing of beer.

## WHAT IS REQUIRED?

We require no technical background from brewing.

## WHEN & WHERE?

Two days at SSB in Copenhagen, please see Calendar.

## COURSE FEE & CANCELLATION

Prices are incl. lunch, but excl. 25% VAT and accommodation. For cancellation later than 14 days before, we charge full course fee. See Calendar.

## REGISTRATION

Please complete the application form at [www.brewingschool.dk](http://www.brewingschool.dk)



# CIDER MAKING

Cider is a diverse group of products and many people are not aware of the long traditions for producing the original type of cider. This course will focus on the traditional approach to cider making. The course will include lectures in apple varieties, juice making, fermentation, maturation, clarification, stabilisation, blending and final treatment. We will put special emphasis on cider making in a brewery. We will taste different ciders as introduction to cider styles. The participants will themselves make an exercise in product development. We will give examples of how to combine cider and food and there will be an introduction to the cider market and cider regulations. On day 2, we will make a practical exercise in apple pressing and fermentation and on day 3, we will visit a juice factory.

## WHO WILL BENEFIT?

Cider and beer enthusiasts, wine and beer journalists, food bloggers, home brewers as well as technical staff from the brewing and beverage industries employed in product development.

## WHAT IS REQUIRED?

We recommend a basic awareness of food production, but it is not required.

## WHEN AND WHERE?

Three days at SSB in Copenhagen. See Calendar.

## COURSE FEE & CANCELLATION

Prices are incl. lunch, but excl. 25% VAT and accommodation. For cancellation later than 14 days before, we charge full course fee. Please see Calendar.

## REGISTRATION

Please complete the application form at [www.brewingschool.dk](http://www.brewingschool.dk)



# SOFT DRINK TECHNOLOGY

Most larger breweries within the Nordic countries produce soft drinks in addition to beer. This course introduces the raw materials used in manufacturing of soft drinks together with product development and production processes. Course subjects will be functional drinks, sports- and energy drinks, water, sugars, syrups, sweeteners, flavours, colours, acids, preservatives, design of soft drinks, preparation of soft drinks incl. pre-mix and post mix, calculation of Brix in syrups, microbiology of soft drinks and quality control of soft drinks. All contents are presented by use of examples and exercises.

## WHO WILL BENEFIT?

The target participants are technical staff from the brewing and beverage industries employed in product development or newly employed in production of soft drinks.

## WHAT IS REQUIRED?

No formal entry qualification is required. Teaching language is English.

## WHEN AND WHERE?

Four days at the Scandinavian School of Brewing in Copenhagen including visits to a soft drinks plant and a flavour company. See Calendar.

## COURSE FEE & CANCELLATION

Prices are incl. lunch, but excl. 25% VAT and accommodation. For cancellation later than 14 days before, we charge full course fee. See Calendar.

## REGISTRATION

Please complete the application form at [www.brewingschool.dk](http://www.brewingschool.dk)



# EXECUTIVE COURSE

Managers in senior positions within the supply chain of a brewery or similar industry often do not have a brewing background, but are themselves managers for Master Brewers. This course will make the participants able to exploit and challenge Master Brewers when discussing raw materials, CAPEX, NPD, QA and production issues. The level is demanding and teaching is in a small, exclusive team. The first module will focus on raw materials, malting, brewhouse, modern yeast performance, fermentation and stabilisation through various filtration systems to various packaging systems. You will learn basic brewing calculations and brewery dimensioning. The second module will focus on modern plant maintenance concepts, KPI's, utility management and modern packaging materials. We will look at production a part of the Value Chain in the brewery with warehousing, transport, distribution and planning.

## WHO WILL BENEFIT?

Senior supply chain managers with an ambition to learn about brewing, beer processing, packaging and utilities.

## WHAT IS REQUIRED?

An educational background within engineering, logistics, financing or commerce at advanced level and excellent English skills to be able to read and understand a large amount of technical English. We expect the participants to perform team exercises in class and plant environment, work into evenings and to take an active part in the course. There is a written test at the end of the second week. Successful candidates will be entitled to membership of the Danish Master Brewers Association.

## WHEN AND WHERE?

Two modules of 5 days each at the Scandinavian School of Brewing in Copenhagen including visits to a malting plant, a can maker and two breweries. See Calendar.

## COURSE FEE & CANCELLATION

Prices are incl. lunch, but excl. 25% VAT and accommodation. For cancellation later than 14 days before, we charge full course fee. See Calendar.

## REGISTRATION

Please complete the application form at [www.brewingschool.dk](http://www.brewingschool.dk)





# HOPS TOUR

This is a chance to investigate deeply into the world of hops. We will visit the Hops Museum in Wolnzach Experience the Hops harvest. Introduce you to new Hops Varieties and get to know the latest trends in new type Hops and learn how you can profit by these. During the course we will visit local breweries. On this tour you can experience authentic bavarian Beer Culture and taste local beer. Since this tour is arranged as a mix of visits, exposure to what hops is and social activities, this course is well suited to bring your spouse.

## WHO WILL BENEFIT?

Beer enthusiasts, wine and beer journalists, food bloggers, home brewers as well as technical staff from the brewing and beverage industries employed in product development.

## WHAT IS REQUIRED?

We recommend a basic knowledge of beer production, but it is not required.

## WHEN AND WHERE?

Three days at SSB in Copenhagen. See Calendar

## COURSE FEE & CANCELLATION

Prices are excl. 25% VAT and accommodation. For cancellation later than 14 days before, we charge full course fee. See Calendar.

## REGISTRATION

Please complete the application form at [www.brewingschool.dk](http://www.brewingschool.dk)

