

# Brewlab

Course:	Brewlab Diploma in British Brewing Technology
Duration:	Spring Course: 9 teaching weeks with 2 week break at end of week 5 Summer Course: 9 teaching weeks with 1 week break at end of week 5
Main venue:	Brewlab, Unit 1 West Quay Court, Sunderland Enterprise Park, SR5 2TE
Cost:	£8750 (includes £900 deposit to secure your place). Final payment balance to be received 8 weeks prior to the course commencement date. All learning and brewing materials supplied during the course are included in the course fee.
Accommodation:	Included in the course fee. Self-catering student style arrangement at the University of Sunderland.

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## Introduction

This programme is well suited to support independent study for formal brewing qualifications, particularly the new Institute of Brewing and Distilling (IBD) examinations, ideally the General Certificate in Brewing. The course theory and practical activities can guide you towards these qualifications and tutorial work will allow for examination training. Please enquire at an early stage if you are looking for this support so we can make the appropriate arrangements with the IBD.

The course has no formal pre-requisites for study but we do advise that you anticipate the basic mathematical, biology and chemistry requirements. We can provide additional support in basic sciences but please let us know as early as possible if you are likely to need this.

It is also an advantage if you have some background experience of brewing on a home-brew or commercial basis.

During the course you will be studying alongside other students at varying academic levels. By attending this course you will obtain a comprehensive and modern view of brewing and ancillary crafts. From your study you will meet many students with a range of backgrounds to extend your own experience and understanding.

Additional materials (including module guides) are provided to participants on final payment. The guides cover subject matters for the various parts of the course, providing specific details on activities and assessments. During the course, study and practical guides are available to provide theoretical background and support for the different study areas.

## Aims

The Diploma aims to provide you with an unrivalled practical experience of British and International brewing. This is achieved through brewing time in our own 3.5 barrel brewery and individual 25 litre recipe development equipment and placements in commercial breweries. Commercial grade product consistency is demonstrated through teaching of both practical and theory of Quality Control, Quality Assurance and Microbiological techniques. Our aim is to teach up to date theoretical and practical concepts in craft brewing. Our teaching and learning programme gives students a variety of opportunities to pursue all areas of craft brewing,

We recognise that you may have individual practical objectives relating to your business and employment. We will support you to choose the best use of your time and the course facilities to further these objectives. We aim for you to finish the course with the most appropriate range of experiences in British and international brewing whether these are to gain accredited qualifications, to undertake commercial practical brewing or a combination of both.

## Objectives

The course content will allow you to:

- Understand the theoretical processes involved in the production of worts for making British and international beers of traditional styles
- Understand the fermentation of worts to produce a pre-defined beverage
- Analyse beers and yeast for basic chemistry and microbiology using standard methods
- Brew at least 7 times on the 25 litre kit
- Participate in the larger commercial production of beer at a variety of stages from ingredient handling to sales and dispense
- Investigate a specific aspect of beer character and present the results in the form of an experimental report
- Create a variety of different recipes. The optimum selection of these can then be brewed and at least one finished beer will be put on sale in local pubs and bars
- Develop skills and experience in the taste assessment of a wide variety of beer styles
- Complete a beer food matching exercise
- Understand Food Safety System planning and implementation (HACCP)

- Experience the engineering practicalities of breweries and see how these limit the quantity and quality of beverage produced
- Review Packaging techniques including bottle conditioning
- Develop and use quality assurance schemes
- Review the historical background of British Brewing and visit representative sites of brewing archives
- Visit breweries, manufacturers, bottling plants and suppliers of ingredients to consider how brewery planning, construction and commissioning are achieved
- Receive business start-up planning, sales and marketing advice to assist setting up a craft brewery
- Gain an appreciation of the financial investment and controls required to operate a craft brewery or brew pub
- Present a basic business plan to your colleagues on the course
- Prepare students for intermediate Institute of Brewers & Distilling (IBD) qualifications

## Topics

The course will cover:

- Brewhouse health and safety
- Liquor treatment and recipe formulation
- Practical brewing
- Commercial brewery placements
- Field trips
- Raw materials - wort production
- Wort production - methods and plant
- Wort boiling
- Wort clarification
- Basic principles of yeast
- Fermentation practice
- Alternative sour fermentations
- Yeast - husbandry and handling
- Beer maturation
- Quality and process control
- Beer quality – flavour evaluation
- Beer quality - contamination
- Food safety systems
- Brewery engineering
- Cleaning and disinfection
- Finance and practical accountancy
- Brew plant design, premises and equipment
- Business start up
- Marketing and sales
- Dispense systems
- Packaging - small and bulk
- Brewing history

## Course components

The Brewlab Diploma in British Brewing Technology is a combination of theoretical and practical instruction in brewing, supported by external brewery placement in local breweries and practical brewing experience on our training site.

The main course components are:

### Brewery History

Participants study the history and development of brewing procedures and British breweries, relating technological advances to beer styles. Visits to traditional breweries provide contact with experienced brewers and historians.

### Brewing Technology

This module provides a strong theoretical basis for the course, covering the full brewing process from ingredients to packaging. Theoretical treatment covers recipe formulation, wort production, boiling, yeast metabolism and fermentation systems. In addition, we review the construction and engineering of brewing plant and equipment. Quality control and assurance is emphasized. Traditional and modern approaches to brewing British ales are illustrated with practical work and demonstrations.

The following modules supplement this instruction, providing detailed tuition in additional areas relevant to the brewer.

### Business Start Up

Tutors give advice on the practicalities of setting up a business, from conducting market research, writing a business plan, and the requirements of operating a micro brewery.

### Cellar Management

Procedures are covered for cellar design and layout, cask handling, keg handling, hygiene and dispense procedures. Participants visit working cellars providing opportunities to discuss beer dispense in a variety of systems and environments.

### Marketing and Sales

Basic marketing skills are covered to help participants plan their marketing and sales strategy, taking into account their strengths, the competition, different methods of promoting a business and the importance of e marketing, including website development.

### Microbiology

Instruction is given in the use of the microscope and aseptic techniques. Yeast and bacteria are considered for their growth and brewing spoilage characteristics. Practical work is undertaken to develop basic microbiological skills.

### Practical work

Practical work is a major component of the course and mini brews are conducted by individual students. This takes place at Brewlab, where brewing is conducted for research and for

commercial production. Day placements in local British breweries, including the 100 litre Darwin Brewery in Sunderland, enable participants to follow larger scale production on site.

### Taste Training

Programmed sessions provide instruction in beer flavour assessment. This provides the opportunity to develop skills in a variety of tasting procedures including flavour profiling and difference assessment. British beer features are highlighted and comparisons made between beer style characteristics.

### Visits

Visits may be made to major establishments involved in the brewing industry, such as maltings, equipment suppliers and fabricators. Evening social visits are arranged with breweries to allow the opportunity to meet British brewers in informal settings and to experience the historic production plants associated with acclaimed British beers.

Working placements may be arranged in British breweries for participants who wish to extend their stay and develop more extensive day to day experience of working practice. This is a unique element of the Practical Brewing course. In addition you make friendships which can give you long term contacts for future visits and professional support.

Please enquire for further details.

## Placement options and support

Placements in working breweries are a valuable and acclaimed component of Brewlab's Certificate and Diploma courses. Conducted in our collaborating breweries placements offer opportunities to view and participate in commercial brewing and gain unique experience of working practices.

As an addition to our extended course provision Brewlab can offer to arrange for more extensive brewery placements after completion of Brewlab Certificate and Diploma programmes. These placements would be with collaborating breweries in the UK or overseas and would offer day to day experience in production for periods of up to four weeks or in some funded options for up to six months.

Placements are free of charge and participants would not receive an income. However, they would contribute to day to day brewing operations in exchange for developing first-hand experience and knowledge of the brewing industry. Participants would be responsible for their own accommodation but Brewlab would be able to offer assistance in sourcing suitable options. Extended placements can be arranged in advance of commencing the Certificate or Diploma courses or during the programmes.

Funding options may be available to eligible participants to cover accommodation and living expenses in some instances. Please contact us for details of options and locations.

## Teaching and learning strategies

The course is taught through an extended 9 week programme. Various modules and placements are timetabled with additional time dedicated to self-study and investigative work where relevant. The course includes a break at the end of week 5. We aim to provide a learning programme suitable to your needs, geared to your pace of work. Teaching is undertaken in a variety of styles from lecture format to informal tutorials, seminars and structured laboratory investigations. We work with small groups to provide personal attention and enable you to enjoy a modern teaching environment.

Practical work is the most important aspect of our teaching and we aim to instruct you in both brewing procedures and laboratory methods through demonstration with hands-on experiences, particularly using our own brewing equipment. During your stay you will be allocated your own 25 litre kit and you will brew on this at least 7 times.

We do not expect you to learn all aspects of brewing in the short time you will be at Sunderland so we provide you with reference notes on all our courses.

Course work is continually assessed through the teaching programme and examinations take place both during and at the end of the course. The pass mark is an average of 40%.

Brewlab certificates of achievement are comparable to the British grade NVQ level 3.

This work is good preparation for the Institute of Brewers & Distillers examinations, which can be taken at Sunderland or various locations worldwide.

Your self-study tasks will include the time required for the completion of course work assignments and preparation for these end of course examinations. Alternatively you may wish to use your self-study time on specialist areas relevant to your interests.

Our Diploma in British and International Brewing Technology is accredited with the Quality Mark from ONE Awards North East.

ONE Awards North East is an independent educational Awarding Organisation recognised by the Qualification Regulator in England (Ofqual). They audit and assess our teaching methods, materials and practical work to ensure they meet their strict training criteria. Records of study and attendance are also maintained.

The Quality Mark confirms this course and its training methods are delivered to the highest standard.

## Accommodation

Accommodation is included in the course fee. It is self-catering student style provided for the duration of the course.

Each room has a single bed, desk, washbasin, wardrobe, Wi-Fi access. Communal areas are cleaned once a week.

There is a shared kitchen, lounge, bathrooms and shower facilities. There are no TV's in the rooms.