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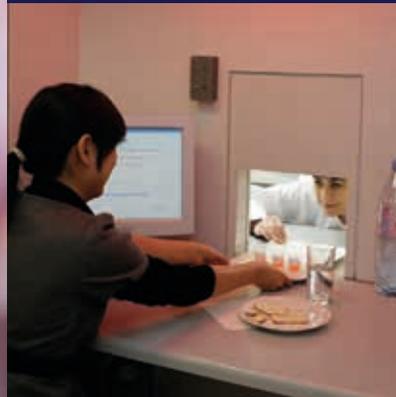
Training courses in sensory science

Our sensory science training programmes are
designed for those working in industry

nottingham.ac.uk/pgstudy/biosciences



Leading research
environment
for Food Science



Advanced training
for continuing
professional
development



Links with global
food and drinks
industry

Innovative,
high-tech learning
environment



Our courses

We are well known for excellence in sensory science research and Campden BRI is the UK's largest independent membership organisation carrying out research and development for the food and drinks industry worldwide. Such a combination of expertise offers delegates excellent opportunities to develop their knowledge and apply this to the workplace.

Postgraduate

PG Cert Sensory Science

Venue: The PGCert in Sensory Science is based at the University's Sensory Science Centre at Sutton Bonington Campus, with some modules held at Campden BRI in Gloucestershire.

The PGCert in Sensory Science comprises six compulsory modules. Each module is assessed by a formal examination and/or a piece of coursework.

The flexible nature of the course enables delegates to study on a part-time basis, typically two modules per year completing the course within three years. The start date for the PGCert is recommended as September or February, although registration is possible at any time throughout the academic year.

Modules are supported through the University's virtual learning environment which provides access to a wealth of electronic resources to facilitate learning. Delegates registered on the PGCert also have full access to the University's extensive online and in-house library facilities.

Content

Each module runs for three or four consecutive days and, with the exception of the Sensory Science Project, they can be taken as standalone individual courses. Successful completion of all six modules leads to the award of the PGCert in Sensory Science.

The modules we currently offer are:

- Sensory Evaluation and Sensory Techniques
- Sensory Evaluation – Statistical Methods and Interpretation
- Advanced Sensory Science and Topical Techniques
- Consumer Sensory Science – Qualitative, Quantitative and Topical Techniques
- Food Flavour
- Sensory Science Project

The sensory science project requires delegates to report on a practical project carried out to address a commercial or technical issue currently challenging their organisation, supported by a tutor from University of Nottingham or Campden BRI. The practical element is usually carried out at your place of work.

Entry requirements

To register for the PGCert, delegates are expected to have an honours degree in a science-based subject and/or to have relevant experience in sensory analysis.

Applicants whose first language is not English must also achieve:

- IELTS 6.0 (with no less than 5.5 in any element)
- PTE (Academic) 55 (minimum 51)

Test results should be no more than two years old. Pre-sessional and in-sessional English language courses for international students are run by our Centre for English Language Education (CELE).

We also have two one-day, optional courses available:

- Sensory Evaluation: An Introductory Workshop
- Sensory Methods for Quality Control

Find out more

Academic enquiries:
Dr Rebecca Ford, Assistant Professor in Sensory Science
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“This course is brilliant – I have studied alongside work and it's really helped improve my understanding of sensory and consumer methodologies. I work for a research agency and having the most up-to-date information means I am able to offer my clients the best approaches to meet their needs. The course is really interactive and practical – and fun. It does require commitment but you gain so much knowledge in return. I'd recommend it to anyone who works in the industry.”

PGCert in Sensory Science student

PG Cert modules/Short Courses Three/four days per course

Sensory Evaluation and Sensory Techniques

Venue: Campden BRI, Chipping Campden, Gloucestershire

This module is run by Campden BRI and provides an introduction to sensory evaluation techniques, data analysis and panel selection. Many companies appreciate just how valuable sensory evaluation can be to their business. However, it is crucial that it is implemented with a thorough understanding of panel training methods and interpretation of results. Campden BRI's team of sensory scientists draw on their own industrial experiences to demonstrate how sensory best practice is implemented in the workplace.

Content

- An introduction to sensory evaluation – the senses, sensory methods and panels
- Data collection, sensory statistics - univariate and multivariate analysis
- Discrimination tests and descriptive profiling methods
- Panel performance statistics and motivation
- An introduction to consumer sensory test methods

The module is accredited at intermediate level by the Institute of Food Science and Technology (IFST) and delegates have the option of taking the IFST examination in sensory science.



Sensory Evaluation – Statistical Methods and Interpretation

Venue: Campden BRI, Chipping Campden, Gloucestershire

This module takes delegates through some of the fundamental theory behind the statistical analysis of sensory data. Starting with univariate techniques (including difference and similarity testing, ranking and ANOVA) and moving through to multivariate analysis – for example PCA. The course highlights important issues for the application and interpretation of statistical techniques.

Content

- Analysis of difference and similarity tests
- Software for data collection and analysis
- Analysis of parametric and non-parametric data
- Univariate and multivariate statistics, including ANOVA
- Principal component analysis
- Cluster analysis and preference mapping

Advanced Sensory Science and Topical Techniques

Venue: University of Nottingham, Sutton Bonington Campus

This module provides both a fundamental and practical understanding of human sensory perception and the techniques used to examine them. The module starts with an update on the mechanism of sensory perception and considers aspects of individual variation such as genetic factors, age and gender. This is followed by introduction to psychophysics, including threshold testing and signal detection theory which underpins the use of d' and R-index measures. We consider the use of newer labelled magnitude scales and temporal measures of sensation including time intensity and temporal dominance of sensations (TDS) methodologies.

We also look at the relative merits of the rapid methods now available to sensory scientists and finish by bringing the senses together in consideration of the concept of multimodal perception and interactions between the senses.

Content

- Receptor mechanisms
- Individual variation in sensory perception
- An introduction to psychophysics
- Evaluating methods for threshold testing
- Signal detection theory, d' and R-index
- Temporal methods including temporal dominance of sensations
- Rapid methods for profiling
- Multimodal perception

Consumer Sensory Science – Qualitative, Quantitative and Topical Techniques

Venue: University of Nottingham, Sutton Bonington Campus

The course considers the impact of expectation and context before reviewing both qualitative – such as focus groups – and quantitative techniques. We reflect upon emotional response and the methods used to capture this before moving on to more advanced approaches such as conjoint analysis and a review of the techniques available in the preference mapping toolbox.

Content

- Factors affecting food choice, drivers of liking, context and expectation
- Qualitative research methods including focus groups and associated result analysis
- Quantitative research methods including questionnaire design and results analysis
- Advanced techniques: elicitation techniques, emotional measures, preference mapping and conjoint analysis



Food Flavour

Venue: University of Nottingham, Sutton Bonington Campus

This module introduces the fundamental science of food flavour through relevant scientific case examples and industrially relevant applications. Both analytical chemistry and flavourist-style approaches are taken to explore how flavour and flavours can be generated, analysed, delivered and commercially exploited. The course is particularly relevant to developing scientists in the food, drink or flavour industry and to students who wish to broaden their experience and subsequently enter the food industry. The module covers understanding flavour compounds, measuring flavour, flavour release, and flavour formulation and applications.

Content

- Understanding flavour compounds – flavour chemistry; their biological origins; flavour generation; flavour carrier systems
- Measuring flavour – flavour analysis (volatile and non-volatile) theory; practical approaches to flavour analysis; analytical techniques and scenarios
- Flavour release – orthonasal and retronasal aroma delivery; oral processing/mouth physics; *in-vivo* flavour delivery; taste-aroma interactions
- Flavour formulation and applications – flavour legislation; case examples; practical (flavour blending), industrial applications



University of Nottingham has made every effort to ensure that the information in this leaflet was accurate when published. Please note, however, that the nature of the content means that it is subject to change from time to time, and you should therefore consider the information to be guiding rather than definitive.

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One-day courses

Sensory Evaluation: An introductory workshop

Venue: University of Nottingham, Sutton Bonington Campus

An IFST-accredited course introducing sensory science as a scientific discipline, including:

- The senses and sensitivity
- Sensory panels: who should be assessing your products?
- Controlling sensory investigations: the room, the samples, the panel
- Test methods – discrimination, descriptive and acceptability: what methods exist; when and what can I use them for?

Sensory Methods for Quality Control

Venue: University of Nottingham, Sutton Bonington Campus

This course reviews the role of sensory science in quality control, including:

- Defining sensory quality and sensory specifications
- Issues concerning the introduction of sensory quality programmes
- Sensory quality control measures

Entry requirements

There are no specific entry requirements for the one-day courses.

Find out more

Academic enquiries:
Dr Rebecca Ford, Assistant Professor in Sensory Science
r.ford@nottingham.ac.uk

For information on dates and availability, as well as more detailed course content, please go to:
nottingham.ac.uk/biosciences/sscourse

Funding your studies

When looking at how to fund your postgraduate studies, it's worth taking the time to research your options, as funding is available from a variety of sources.

 nottingham.ac.uk/pgstudy/funding

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