

6 CENTRES FOR EXCELLENCE IN TEACHING AND LEARNING

The Higher Education Funding Council for England (HEFCE) recently announced the creation of 74 Centres for Excellence in Teaching and Learning (CETLs) which aim to promote excellence across all subjects and aspects of teaching and learning in higher education. With funding of £315 million over five years this represents HEFCE's largest ever single funding initiative to promote teaching and learning. The CETLs are hosted by 54 different institutions, widely distributed across England.

A full list of all the funded CETLs can be found on the HEFCE website at:

<http://www.hefce.ac.uk/news/hefce/2005/cetl.asp>.

Below are brief project outlines and contact details of a number of CETLs that will be working within the broad area of bioscience.

CENTRE FOR EXCELLENCE IN TEACHING AND LEARNING IN APPLIED UNDERGRADUATE RESEARCH SKILLS

Our multidisciplinary CETL will support the development of bioscience students' research skills through their engagement with primary research, capitalising upon our unique University museums, collections, and fieldwork facilities. We will develop innovative educational resources to support students' ability to recognise and validate problems, think independently and critically, understand project design, develop observational skills and to analyse, evaluate and communicate findings. We will create dedicated undergraduate research space and design new education materials to complement bioscience curricula developments. There will also be increased scope for students to learn, develop, and apply their research skills through enhanced work experience and research funding opportunities.

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WINNER!

Congratulations to Jessica Haglington, Department of Biological Sciences, University of Exeter, who is the winner of the Centre for Bioscience's Student Essay Competition. As a national winner, Jessica's essay has been submitted as the bioscience entry to Higher Education Academy's Student Essay Competition. Her essay is available at

<http://www.bioscience.heacademy.ac.uk/publications/essay.htm>

GENIE: GENETICS EDUCATION — NETWORKING OF INNOVATION AND EXCELLENCE

This CETL builds on synergy between world-class science and genetics education. We are developing innovative approaches through projects such as, design of modules focussed on ethics and the development of problem-based packages involving experimental design and evaluation. We are establishing a network of stake holders in genetics education through seminars and workshops; and a web-based network of shared resources — the Virtual Genetics Education Centre. Intrinsic to our philosophy is the embedding of generic skills and the application of generic approaches to other fields, such as, Biotechnology, Medicine and Law; enhancing the learning experience of a wide range of students.

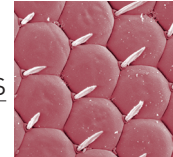
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LEARNING, TEACHING AND ASSESSMENT: A Guide to Good Practice for Staff Teaching d/Deaf Students in Science and Engineering

The guide is part of the SignsOnline project and is aimed at providing concise practical advice on different teaching situations, from lab work to formal lectures. The guide is available free of charge and can be downloaded in pdf format from the following web site:

<http://www.wlv.ac.uk/teachingdeafstudents/>



THE EXPERT CENTRE

The aim of this CETL is to facilitate the use of blended learning to support the educational (and therefore professional) development of a range of students including those in Biomedical Sciences.

Our objectives are to provide; staff and students with opportunities for enhanced professional development through innovative approaches to learning and teaching using a range of technologies and face-to-face activities; students with opportunities for research using up-to-date technologies and modern approaches to teaching and learning, and colleagues with support to develop their scholarly activity in teaching and learning.

The expected outcomes of this CETL are that diverse staff will work collaboratively, providing opportunities for personal development and reward, whilst leading to further enhancement of the student learning experience and (through research) the pedagogic knowledge base for blended learning.

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POSTGRADUATE STATISTICS CENTRE OF EXCELLENCE

The CETL aims to enhance and extend our existing excellent practice in quantitative postgraduate training, both to specialist statisticians and to users of statistics in other disciplines. This dual objective echoes the Lancaster Statistics Group's reputation for world-class statistical research at the interface between theory and applications. By collaborating with colleagues in the biological and health sciences, we will motivate and encourage topical and relevant inquiry-led training in statistical methods and their application to substantive scientific problems.

We will be developing short training courses particularly relevant to bioscience postgraduate students and look forward to welcoming your students.

Professor Amanda Chetwynd

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Acknowledgements for photography used throughout this publication

Front cover montage: Gordon Beakes, Brian Wilson, Paul F Brain and Neil Smith; Page 2: Cork, Eden Project, Brian Wilson; Page 3: Bread Wheat, Neil Smith; Page 4: Bumble Bee, Paul F Brain; Page 5: Fallen Leaves, Brian Wilson; Page 6: Botryococcus, Gordon Beakes; Page 7: Fruit Fly Eye, Gordon Beakes; Page 8: Flower Head, Brian Wilson; Page 9: Anabaena, Gordon Beakes; Page 10: Goat, Brian Wilson; Page 11: Andean Lupin, Department of Agriculture, University of Reading; Page 12: Adonis Blue Butterfly, Paul F. Brain.

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THE CENTRE FOR SCIENTIFIC LITERACY: ASSESSMENT-FOCUSED SUPPORT FOR ACHIEVEMENT IN SCIENTIFIC WRITING

This CETL will promote and celebrate scientific literacy. Building on previous collaborations (see www.assessmentplus.net), the CETL will establish Scientific Writing Units and provide a range of other mechanisms to help students develop their writing by focusing on how student writing is assessed. Based initially in psychology, the CETL will rapidly extend to a range of other disciplines, and radiate out to several satellite partner institutions. The CETL is very strongly research-oriented, and will support pedagogic and psychological research on student writing and assessment, including several PhD bursaries.

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Collaborating Institutions

Liverpool Hope University College
Aston University

ADVANCING SKILLS FOR PROFESSIONALS IN THE RURAL ECONOMY (ASPIRE)

The Aspire CETL builds on Harper Adams' excellent record in student progression, achievement and employment in professions serving the rural economy, including curricula in agriculture, crop science, animal science, environmental science and applied bio-veterinary science. We shall create a centre that brings together staff and students to provide a focus for work-based and placement learning, academic and professional skills development, learner support and learning technologies. We aim to enhance support for all students, especially those who are part-time, sandwich or work-based learners and those with disabilities. We intend to develop and share good practice with others, primarily through funded secondments.

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CENTRE FOR EFFECTIVE LEARNING IN SCIENCE (CELS)

The Centre for Effective Learning in Science (CELS) aims to create a new image for science within both the HE and school communities as more relevant, accessible and achievable. Building upon best practice in the Biosciences, Chemistry & Physics CELS will develop and trial new approaches to teaching science. For example, one focus of CELS will be creating materials to support biosciences teaching within broader degrees in Sports Science or Forensic Science (whose entrants typically have more diverse scientific backgrounds). In parallel, we will develop a range of outreach activities for schools science, for example, ExperimentsatSchool (<http://experimentsatschool.lsz.ntu.ac.uk/>) to encourage entry to HE courses.

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CENTRE FOR OPEN LEARNING OF MATHEMATICS, SCIENCE, COMPUTING AND TECHNOLOGY

The Centre will provide excellent OU teachers with the opportunity to develop and disseminate their own good practice. These 'teaching fellows', drawn from both the full-time and part-time staff, will develop their skills within development projects. We will generate new learning materials and will promote new technology approaches.

We will focus initially on assessment and e-learning. Example project areas are; interactive computer-based teaching of spectral analysis, online methods for peer assessment, and development of teaching models for more fully interactive software.

Open learning occurs at many universities and we are anxious to promote collaborations through both visits and exchanges.

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EXPERIENTIAL LEARNING IN ENVIRONMENTAL AND NATURAL SCIENCES

The CETL arises from our existing excellence in fieldwork, laboratory work and work-based learning. We will enhance our provision in these areas by using innovative new technologies, applying inter-disciplinarity and embedding the skills associated with employability and entrepreneurship more firmly in the experiential curriculum. We will adapt our laboratories and curricula to ensure that large cohort sizes, or individual disability, do not impede access to a lively, extensive and safe experiential curriculum. We will develop an innovative Immersive Vision Theatre and an equally advanced 'drop-in' Lab+ facility for the benefit of our students, visiting educational groups and the local community. A fuller description of our plans is available from the contacts staff shown.

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THE INTER-DISCIPLINARY ETHICS ACROSS SUBJECT DISCIPLINES CETL (IDEAS CETL)

IDEAS builds on the established excellence in ethics teaching in the Leeds medical course where subject specialists and ethicists help students integrate the diverse ethical issues in the course into a coherent Ethics Theme which crosses subject and year boundaries.

Within the University of Leeds, IDEAS will work in its first year within the Faculties or Schools of: Medicine, Biosciences, Business, Engineering and Nanotechnology.

IDEAS will: establish Ethics Theme Teams to integrate the consideration of ethical issues within subject specific topics, e.g. a Biosciences ethics theme team, and work with appropriate organisations in the public, private and HE sector to contribute to national and international debates on these issues and their pedagogical implications.

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BRITISH SIGN LANGUAGE GLOSSARY

We are delighted to be able to say that a British Sign Language/English online glossary for science has been launched. The resource contains a large bank of specialist terminology in British Sign Language and has been designed primarily to support Deaf students entering Higher Education and their interpreters. The web site is freely available to the education sector and the public at:

<http://www.sciencesigns.ac.uk>

THE CENTRE FOR EXCELLENCE IN TEACHING AND LEARNING: ENQUIRY BASED LEARNING

Our aim is for the CETL to be recognised as the international centre in Enquiry based learning (EBL). We will build on our existing excellence in EBL, with Medicine and Manchester Business School already international leaders in problem-based and case-based learning. It is essential that our students are educated for knowledge creation, lifelong learning and leadership. They will take on leading roles in their future working environments; directing change, asking important questions, solving problems and developing new knowledge. Basing learning on a process of enquiry will develop the necessary abilities and attitudes, while still taking account of an increasingly diversified student population. The CETL will support and disseminate new EBL initiatives inside and outside the University. We will reward those leading innovation, make available expertise and resources, and carry out extensive evaluation and research.

Professor Paul O'Neill
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ENTREPRENEURSHIP FUNDING

Can you inspire entrepreneurship in bioscience students? Grants of up to £2250 are available for the production of resource packs about entrepreneurship in the biosciences. Further details are available at <http://www.bioscience.heacademy.ac.uk/issues/entrepreneurship/funding.htm>

Deadline for receipt of applications: 22 June 2005

CENTRE FOR ACTIVE LEARNING (CeAL) IN GEOGRAPHY, ENVIRONMENT AND RELATED DISCIPLINES

CeAL will be an international centre of excellence reviewing, developing, promoting and embedding active learning. We see the Biosciences as an important constituent of the Centre and we are keen to draw on the experiences and serve the needs of the Bioscience community. Our approach enables students to construct theoretical understanding through reflection on inquiry in the field, studio, laboratory and classroom, using real sites, community-related and employer-linked activities. CeAL will be developed around communities of active learners where students and staff inquire together. A key innovative feature is joint student projects with related Schools in the University, and initially thirteen HEIs in England and ten universities overseas.

Carolyn Roberts and Professor Mick Healey

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PROFESSIONAL LEARNING FROM THE WORKPLACE

Our CETL arose from a fusion of ideas and good practice in Schools of the University engaged in Professional Learning from the Workplace (PLW) which encompasses learning for, at and through work. The School of Biosciences has been involved with PLW for many years, notably in our Accreditation of Workplace Learning scheme for students employed in NHS laboratories and the Postgraduate Certificate in Work Based Tutoring for their laboratory supervisors. We aim to be a resource and development centre for participants in PLW, preparing students for their careers and life-long learning and in training, research and disseminating PLW activities.

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