



University College Dublin

REPORT OF THE PRESIDENT
SEPTEMBER 2011 – AUGUST 2012



**Report of the President
University College Dublin
National University of Ireland, Dublin**

September 2011 – August 2012

For presentation to the Governing Authority of
University College Dublin, National University of Ireland,
Dublin at its meeting on 11 December 2012.

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1. An Taoiseach Enda Kenny TD, opened phase one of the UCD Science Centre (UCD Centre for Molecular Innovation and Drug Discovery) in September 2011, providing 6,300m² of scientific research space for 300 researchers working in pharmaceutical sciences, food and health, and nanomedicine
2. UCD *Ad Astra* Performing Arts scholar, Sam McGovern, during rehearsals for UCD Drama Soc's production of *Hamlet*, January 2012
3. On the five year anniversary of the UCD Confucius Institute of Ireland, Minister for Education and Skills, Ruairi Quinn TD, presented the first ever UCD Confucius Medal to His Excellency Mr Guo Jinlong, the Mayor of Beijing, during his visit to UCD in September 2011
4. The President of Ireland, Michael D Higgins was awarded the Vice-Presidency of the UCD Law Society. Before receiving the award, President Higgins addressed students and invited guests at UCD
5. On his first official visit to Dublin in January 2012, UK Deputy Prime Minister, Nick Clegg, visited the UCD Conway Institute of Biomolecular and Biomedical Science, where he met representatives of GlaxoSmithKline, and the all-Ireland Co-operative Oncology Research Group, which works to give patients early access to new cancer treatments
6. The Royal Irish Academy (RIA) recognised the internationally renowned accomplishments of five UCD scholars by enrolling them as members of the academy. Pictured (l-r) are: Patrick Lonergan, UCD Professor of Animal Reproduction; Peter Lynch, UCD Professor of Meteorology; Professor Luke Drury, President of the RIA; Robert Gerwarth, UCD Professor of History; and Richard Sinnott, UCD Professor of Political Science. John Coakley, UCD Professor of Politics, was enrolled in absentia
7. Honoured (l-r) at the UCD Bloomsday conferring, 16 June 2012: Professor Laura Mulvey; Jim Sheridan; Joan Bergin; UCD President, Dr Hugh Brady; Brenda Fricker; Daniel Day-Lewis; and Ulysses Medal recipient, Dr Tony Scott
8. The new UCD Student Centre provides extensive facilities, including a 50 metre Olympic specification pool, fitness and dance studios, film and drama facilities, and the new Fitzgerald Debating Chamber



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Introduction by Dr Hugh Brady, UCD President

Vision

As we approach the midpoint of the UCD Strategic Plan to 2014 *Forming Global Minds*, the University can reflect on the significant progress made to date. This includes the further development of the *UCD Horizons* curriculum, the establishment of *UCD Ad Astra Academy*, the prioritisation of the four major research themes that dovetail with national research policy objectives, the internationalisation agenda and major campus infrastructure projects, such as the re-development of UCD Science Centre. There is much still to do as we evaluate ways to advance our University, further build our reputation nationally and internationally, and contribute to Ireland's recovery. These are the goals that we strive for and we will deliver them by building on our excellence in teaching and research, and striving through our innovation agenda to translate our knowledge and expertise for the benefit of Ireland's economy, culture and society.

Key Initiatives and Successes

Phase one of UCD Science Centre was completed in September 2011, and opened by An Taoiseach Enda Kenny TD. As one of the key science developments taking place within the State, UCD Science Centre is an endorsement of those who research, innovate and teach science and applied sciences in the University. As it expands through phases two and three, it will support the delivery of cutting edge science by providing world-class facilities.

Our internationalisation efforts have also made considerable progress, with the agreement between UCD and Beijing University of Technology to establish a new world-class institution of higher education, the Beijing-Dublin International College.

On the education front the establishment of the *UCD Ad Astra Academy* provides a unique set of opportunities and supports for highly talented students. These are channelled through three strands: the *UCD Ad Astra Academic Scholars* demonstrate exceptional ability in their studies, the *UCD Ad Astra Elite Athletic Scholars* in their sporting endeavours and the *UCD Ad Astra Performing Arts Scholars* in their talent and commitment to performance.

Education

The state of the economy, both national and global, has experienced little reprieve during the year. Conditions remain harsh, so it is very positive news to report that UCD's student population grew by 1.3%. We have set targets for increasing the share of graduate and international students over the period of the Strategic Plan, and, following an increase last year, 2011/12 has also delivered growth. Graduate student numbers are up by 2.8%, and the growth in international student numbers by 9%, is both timely and welcome. These students now represent 28.9% and 20.5% of the UCD student population, respectively. We also

continued our efforts to increase the number of non-traditional students, which now account for 23% of the student population at undergraduate level.

The structure of our colleges and schools evolved during the year. The purpose is to refine the University's academic structure and enhance the alignment of major disciplines and undergraduate and graduate programmes. This has resulted in the formation of seven colleges and 38 schools.

Following the visit of the Irish Universities Quality Board (IUQB) last year, we received a very positive report affirming that we have comprehensive quality assurance processes at institutional level and within the core activities of teaching and research. Building on the Board's recommendations, we developed an action plan which was accepted by the IUQB Management Board in March 2012.

Research

UCD's role as a national leader in research funding continued. Despite a decrease from last year's funding figures, due in part to the previous year's inclusion of €25.7 million in HEA awarded PRTL projects, externally funded research contracts signed in 2011/12 were valued at €75.1 million. Funding levels are below the peaks achieved in the 2007-2009 period, and are likely to remain so, but the total funding figure did include €14.1 million in EU funding, which had been targeted specifically by UCD researchers. This trend will continue.

Innovation

Professor Peter Clinch was appointed to lead the Office of the Vice-President for Innovation, with a mission to enhance the value and quality of UCD's innovation activities. This is being achieved through licensing agreements, patent filings and invention disclosures, as well as partnerships with industry. Successes during the year included: the announcement of Elan Corporation plc professorships, scholarships and annual lecture series; expansion plans for R&D and Innovation facilities at NovaUCD over the next three years for ResMed inc, a global leader in the development and manufacture of medical products to combat sleep and respiratory disorders; and the filing of 39 patent applications across all areas of life sciences, engineering and information communication technology. Such activities are maximising the impact for the University, its partners, and for social and economic life in Ireland and in the wider world.

Internationalisation

UCD's focus on international students and partnerships is a key element of our Strategic Plan. By establishing such links we not only attract important sources of non-Exchequer income, but we also raise our profile internationally while benefitting global society through research, job creation, economic ties and

CONTINUED ON PAGE 4



“It is also important to highlight the efforts of those staff who have taken on extra roles and responsibilities during the year. This considerable extra responsibility and effort ensures that the University continues to succeed in all its spheres of activity and that our students receive the highest standard of education.”

the spread of knowledge. In addition, the University provides a diverse range of study abroad and oversees volunteering opportunities for its Irish students.

The objective under the Strategic Plan is to increase international students to 25% of the student body, which will include a non-EU student population of 15%. The current international percentage of 20.5% is very promising in this regard.

As referenced above, work is ongoing to recruit the first cohort of students to the Beijing-Dublin International College, the first stage of the Beijing-Dublin International University. The new college will focus on areas relevant to successful enterprise development between China and Ireland, including innovation and entrepreneurship.

Finances

In light of the continuing economic difficulties, the university sector in Ireland experienced further financial challenges. There has been a series of reductions in State funding, leading to an ongoing search by the University for ways to increase efficiencies, reduce costs and create additional revenue streams. UCD has managed to increase significantly its income from non-Exchequer sources, over 40% of our funding now falls into this category.

It is important to highlight the committed and ongoing efforts of UCD staff who have had to endure tens of millions of funding cuts while still managing to expand student numbers and maintain our academic programme quality.

Campus development

It is rewarding to know that despite the economic climate, UCD's capital development plans are progressing well. As befits a world-class university we are enhancing our campus by developing academic, residential and leisure facilities. Nowhere was this more obvious than with the opening of the new Student Centre, which is now a focus for social, creative and sporting activity on the Belfield Campus.

This state-of-the-art facility, funded in large part by the students, will cater for a diverse range of student learning and leisure activities and form an integral part of UCD's mission to deliver a holistic educational experience.

2011/12 saw significant progress for two other key projects: UCD Science Centre and UCD Sutherland School of Law.

Following the opening of phase one of the UCD Science Centre in September 2011, phase two is under construction and planning for phase three is underway. When complete, UCD Science Centre will be the largest capital investment in science in the history of the Irish State.

Construction contracts for the new UCD Sutherland School of Law building were signed in early 2012. Occupation is scheduled for late summer 2013, and the building will benefit students, academics and the wider legal profession.

Conclusion

The Governing Authority, under the chairmanship of Dermot Gallagher, continues to offer vital guidance and experience as we seek to realise UCD's strategic vision. It is also important to highlight the efforts of those staff who have taken on extra roles and responsibilities during the year. This considerable extra responsibility and effort ensures that the University continues to succeed in all its spheres of activity and that our students receive the highest standard of education.

2011/12 was another challenging year, but we continue to tackle these challenges with positive results. As we seek to advance knowledge, pursue truth and foster learning, our UCD Strategic Plan to 2014 *Forming Global Minds* shows that we are committed to pursuing excellence in education, research and innovation. This report sets out how we are delivering on that commitment.



Hugh Brady
President



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COLLEGES

Over the course of the year the establishment of three new colleges completed the refinement of the University's academic structure to seven colleges and 38 schools. These developments are designed to enhance the alignment of major disciplines and undergraduate and graduate programmes, improve programme visibility for potential students, industry and government, and support UCD's engagement with the national innovation agenda.

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Strategic plan

UCD College of Agriculture, Food Science and Veterinary Medicine was established on 1 September 2011, and comprises UCD School of Agriculture and Food Science, and UCD School of Veterinary Medicine. The schools operate independently but share a strategic commitment to improving the quality of programmes, student recruitment and research. They are committed to contributing to national economic recovery through their involvement in national initiatives. The schools are targeting increased non-Exchequer revenues and are delivering innovative new programmes (graduate and international), which will make a significant contribution to UCD's finances while reducing the reliance on State funding.

Despite the difficult funding environment of the last year both schools addressed key objectives of the UCD Strategic Plan to 2014 *Forming Global Minds*, most notably in contributing to the University's key research themes in Earth Sciences, Energy and the Environment, and Health and Health Care Delivery. A range of sustainable and long-term international institutional relationships are being developed, in order to provide significantly expanded opportunities for student mobility and exchange, as well as fostering innovation amongst students and staff.

Developments to date

The academic year 2011/12 was one of significant achievement for the newly founded College. Undergraduate programmes continued to be the main revenue generator with the demand for programmes in agriculture and food science seeing a record number of students registered. In UCD School of Veterinary Medicine, Graduate Certificates in Dairy Herd Health and Canine Sports Medicine were introduced, as was the Doctorate in Veterinary Medicine Specialisation (DVMS).

The schools continued to win considerable research funding with Principal Investigators (PI) in UCD School of Agriculture and Food Science granted awards totalling €8.4 million, from a variety of funding agencies including Science Foundation Ireland, Enterprise Ireland, and the Department of Agriculture, Fisheries and Food. The development of a new, focused research strategy by UCD School of Veterinary Medicine resulted in significant alliances between veterinary clinicians and basic researchers, and a marked increase in the number of successful seed funding scheme applications.

UCD School of Agriculture and Food Science forged strong collaborative links with the agriculture and food industry by being instrumental in developing the National Agricultural Research, Education and Innovation Partnership Agreement, between UCD and Teagasc. The Partnership will harness the scientific and technical leadership of UCD and Teagasc to underpin the international competitiveness, growth and sustainable development of the agricultural sector, as well as providing world-class education.

The College continued to build strong international links, with a UCD delegation participating in an Irish trade mission to China, led by the Minister for Agriculture, Food and the Marine, Simon Coveney TD. Visits to two leading Chinese agricultural universities established research and education links. The College also participated in the signing of a Memorandum of Understanding between UCD and a leading Chinese dairy producer, Dairy United, which will result in multi-million euro contracts for products and services, collaborative research projects and the provision of education and training services.

The College continued to support UCD's innovation agenda with two academics in UCD School of Agriculture and Food Science establishing new companies to commercialise the outputs of their research. SireBank supports the breeding of pedigree and commercial sheep, and Equilume developed a novel light therapy solution to maximise reproductive efficiency in horses.

Significant milestones were achieved to ensure the UCD Veterinary Hospital meets the high standards required for the clinical education of students. A new clinical and financial software system was installed, a new administrative system implemented and, thanks to the generosity of alumni, a new Clinical Skills lab was developed which will be used for teaching and for continuing professional development.

UCD College of Agriculture, Food Science and Veterinary Medicine consists of two schools:

College Principal: Professor Maurice Boland

UCD School of Agriculture and Food Science
Head of School/Dean
Professor Alexander Evans

UCD School of Veterinary Medicine
Head of School/Dean
Professor Grace Mulcahy

*As of September 2011



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1. Pictured (l-r) at the signing of a UCD/Teagasc partnership agreement to enhance agricultural research, education and innovation are: Professor Gerry Boyle, Director of Teagasc; UCD President, Dr Hugh Brady; and Michael Berkery, former Chief Executive Officer, IFA. Mr Berkery chaired a joint UCD/Teagasc Working Party to identify ways to formalise and strengthen the long-standing collaboration between the two organisations
2. Professor Maurice Boland, Principal, UCD College of Agriculture, Food Science and Veterinary Medicine, at the 6th Dairy Solutions Symposium *Optimising Production Efficiencies, Lowering Environmental Impact*, co-hosted by UCD and Alltech
3. UCD School of Agriculture and Food Science's stand at the National Ploughing Championships, Athy 2011, where the School promoted its programmes and research to prospective students and industry
4. Pictured (l-r) at the UCD Agriculture, Food Science and Human Nutrition Careers Day are: Professor Alex Evans, UCD Dean of Agriculture; Maeve Dineen, UCD Agricultural Science alumnus and Business Editor, *Irish Independent*; Dr Karina Pierce, President, Agricultural Science Association; and Mr Padraig Kelly, final year UCD Agricultural Science student and Chair of the Agricultural Science Careers Committee
5. At the event to mark the 70th birthday of the Agricultural Science Association (ASA) were (l-r): Owen Killian, Chief Executive, Arysza, and Matt Dempsey, *Irish Farmers Journal* Editor (both guest speakers); with Dr Karina Pierce, ASA President and UCD School of Agriculture and Food Science staff member; and UCD President, Dr Hugh Brady
6. At the signing in China of the Memorandum of Understanding between UCD and leading Chinese dairy producer, Dairy United, were (l-r): Julie Sinnamon, Executive Director, Enterprise Ireland; Professor Grace Mulcahy, Dean, UCD School of Veterinary Medicine; Simon Coveney TD, Minister for Agriculture, Food and the Marine; and Mr Lee Zhenghong, General Manager, Dairy United
7. Minister for Research and Innovation, Sean Sherlock TD (l), presents Dr Barbara Murphy, Head of Equine Science at UCD, with the Enterprise Ireland 'One to Watch' Award 2012, at UCD's Lyons Research Farm in Dublin. The award was in recognition of her work to develop a therapeutic light mask for horses. Also pictured is Dr Keith O'Neill, Enterprise Ireland

UCD College of Arts and Celtic Studies

www.ucd.ie/artsceltic

Strategic plan

UCD College of Arts and Celtic Studies achieved a number of objectives in 2011/12, in line with the vision and aims of the UCD Strategic Plan to 2014 *Forming Global Minds*.

The College continued to enhance its programmes while fostering student engagement, widening participation, attracting an increasing number of international students and advancing the provision of graduate education. The College received positive feedback in quality review and student surveys, and contributed to excellence in teaching, learning and research. A number of innovative projects were also developed, drawing on the achievements of both staff and students. These build on existing strengths in archival holdings and collections, and enhance the College's profile by hosting major events and by working in collaboration with national and international cultural and State agencies to develop the social and cultural life of Ireland in the wider world.

Developments to date

The College Graduate School, directed by Dr Alexander Wilkinson, launched new College-wide promotional material and is developing an Online Graduate Showcase, which highlights the calibre and variety of graduate research. Two new graduate taught programmes have been established: the MA in Modern Languages; and the MFA in Creative Writing. This year also saw the completion of the first practice-based PhD, exemplifying the commitment to new modes of learning in the context of widening definitions of research and innovation.

Internationalisation continued to be promoted in collaboration with UCD International and the Centre for Study Abroad. The new Liberal Arts and Science Programme was under development and the College focused on increasing the intake of international students in all its programmes.

In Teaching and Learning, as well as student engagement, Dr Fionnuala Dillane, UCD School of English, Drama and Film,

and recipient of the President's Teaching Award, continued her work on the Drop-in Writing Clinics; Dr Michael Staunton, UCD School of History and Archives, and UCD Teaching and Learning Fellow, is developing the School's approach to teaching student skills; and the Vice-Principal for Teaching and Learning, Mr Feargal Murphy, supported a number of projects including extending the 'Introduction to the BA' module across Stage One of the BA degree. The enhancement of the student learning environment was reflected by the positive feedback received from the University's student survey.

The College continued to develop innovative, interdisciplinary and collaborative research activity. Colleagues received numerous research awards, including: six IRCHSS (Irish Research Council for Humanities and Social Sciences) Government of Ireland 'New Ideas' Awards; six awards under the UCD Seed Funding: Early Stage Innovation Scheme; and sixteen IRC Postdoctoral Fellowships and Postgraduate Scholarships, exemplifying the innovative research activity of the College, thereby advancing its already excellent research profile.

Members of the College continued to distinguish themselves nationally and internationally. Examples of this year's achievements include: Professor Robert Gerwarth, UCD School of History and Archives, who was elected as a member of the Royal Irish Academy; Dr Lynda Mulvin, UCD School of Art History and Cultural Policy and Vice-Principal for Research and Innovation, who was awarded the Samuel H Cress Fellowship by the Society of Architectural Historians of America; Professor Mary Clayton, UCD School of English, Drama and Film, who was elected President of the International Society of Anglo-Saxonists; Dr Phyllis Gaffney, UCD School of Languages and Literatures, who was awarded the distinction of Chevalier dans l'Ordre des Palmes Académiques by the French government; and Mr Deasún Ó Riain, UCD School of Irish, Celtic Studies, Irish Folklore and Linguistics, who received the Undergraduate Award of Ireland and Northern Ireland.

UCD College of Art and Celtic Studies consists of eight schools:

College Principal: Professor Maeve Conrick
Deputy Principal: Professor Liam Mac Mathúna
Director of Graduate School: Dr Alexander Wilkinson

Vice-Principal for Teaching and Learning: Mr Feargal Murphy
Vice-Principal for Research and Innovation: Dr Lynda Mulvin

UCD School of Archaeology
Head of School
 Professor Tadhg O'Keefe

UCD School of Classics
Head of School
 Dr Philip de Souza

UCD School of History and Archives
Head of School
 Dr John McCafferty

UCD School of Languages and Literatures
Head of School
 Dr Michael Brophy

UCD School of Art History and Cultural Policy
Head of School
 Dr John Loughman

UCD School of English, Drama and Film
Head of School
 Professor Anne Fogarty

UCD School of Irish, Celtic Studies, Irish Folklore and Linguistics
Head of School
 Professor Liam Mac Mathúna

UCD School of Music
Head of School
 Professor Julian Horton

*As of September 2011

Dean of Arts Dr Joe Brady



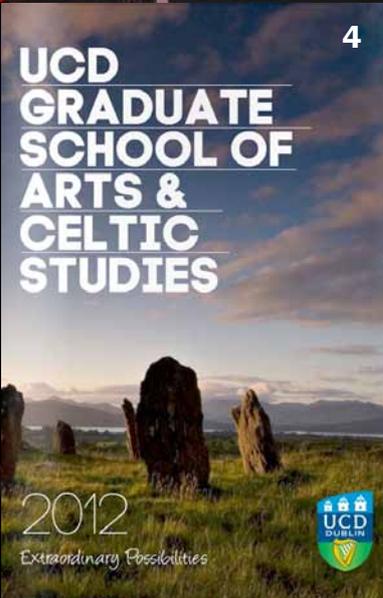
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1. Deasún Ó Riain, UCD School of Irish, Celtic Studies, Irish Folklore and Linguistics, recipient of the Irish Language and Literature Award at the Undergraduate Awards 2012, pictured with former President of Ireland, Mary McAleese

2. Pictured (l-r) at the Association for Canadian Studies in Ireland (ACSI) biennial conference, hosted by UCD, are: Professor John Kelly, Executive Director, Ireland-Canada University Foundation and former Registrar of UCD; Professor Jane Koustas, Craig Dobbin Chair of Canadian Studies, UCD; Professor Maeve Conrick, Principal, UCD College of Arts and Celtic Studies, and President of ACSI; Professor David Wilson, University of Toronto, keynote speaker; and Professor Seamus Smyth, President Emeritus NUI Maynooth, and Joint Chairman Ireland-Canada University Foundation

3. Mr Rory Lynch, undergraduate Music student and UCD Ad Astra Performing Arts Scholar

4. Cover of the new prospectus produced by UCD College of Arts and Celtic Studies to promote their range of graduate programmes

5. Mary Morrissy, Writer in Residence at UCD, is supported by the Arts Council in Ireland and the UCD School of English, Drama and Film

6. UCD College of Arts and Celtic Studies Online Graduate Showcase, featuring Ms Fiona Hackett, UCD Clinton Institute for American Studies, discussing her practice-based PhD programme

6 graduate showcase
College of Arts and Celtic Studies, UCD

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Fiona Hackett on Terra Incognita: Photography, Seismology and the Imagining of Southern California

Posted on 20 April 2012

Fiona Hackett (Clinton Institute for American Studies) talks about her PhD on photography, seismology and Southern California. It was the first practice-based PhD to be undertaken in the College and demonstrates **REPORTS OF THE PRESIDENT** traditional format of the doctoral thesis.

About this site

This site was developed in 2012 to showcase the caliber and variety of graduate research undertaken in the **REPORTS OF THE PRESIDENT** activities in UCD.

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Upcoming Events / News/Links of

Tags: [Photography](#), [Practice-Based PhDs](#) [More](#)

Strategic plan

The College has two schools, both leaders in their fields in Ireland and internationally. Bringing these two strong schools together within the College creates greater opportunities to deepen collaboration and to develop new joint teaching and research programmes. It creates scale to enable the schools to compete more effectively internationally, to acquire more resources and to compete for much more substantial research projects, with a particular commitment to contributing to national recovery.

Recognising the global educational market, key themes for the year were recruiting internationally for faculty and students, and providing international experiences for Irish students and faculty. UCD School of Business, as Ireland's global business school, remained focused on retaining both its international accreditations and its position in world rankings as recognised international quality measures, while UCD School of Law set 'Transforming Law' as its strategic mission.

Developments to date

The two schools began the year with new deans, both of whom put new management teams in place to refocus the schools and strengthen their teaching and research capabilities. UCD School of Law celebrated 100 years of Law graduates and the year was marked by the commencement of building work on the new UCD Sutherland School of Law building, due for completion next year.

The College demonstrated its commitment to national recovery by committing a thirty strong team of faculty and students to facilitate and report on the second Global Irish Economic Forum, hosted by the Irish Government.

Student numbers, both domestic and international, continued to grow, with both schools experiencing growth following earlier curriculum revisions. There was a successful push into the Indian graduate studies market and nearly 40% of the UCD Michael Smurfit Graduate Business School intake was international.

UCD Michael Smurfit Graduate Business School further strengthened its international reach as a founder member of the Global Network for Advanced Management, which is a Yale-sponsored network of 20 leading schools on six continents. It has also developed an alliance with the Department of Foreign Affairs

and Trade, and the African ambassadors group in Ireland, to promote awareness of trade with Africa.

UCD School of Business successfully completed its quality review and also retained its triple accreditation with the successful renewal of its AMBA accreditation following a rigorous review and site visit. Its international rankings were also maintained which are important quality indicators, particularly for international students.

UCD School of Law hosted a number of major conferences and was successful in achieving a significant number of new research grants and graduate research scholarships from ICRHSS. Academic staff at the School published major books with leading university and legal presses, as well as articles in many of the leading international peer reviewed journals.

The College continued to strengthen its teaching and research capabilities by hiring twenty new faculty members. With ten of these coming from overseas this further enhances the College's international credentials, while representing a vote of confidence by the international academic community in Ireland.

Commitment to the future was demonstrated by new MSc programmes in Energy and Environmental Finance, and Digital Marketing, as well as a new BCL in Law with Social Justice. These contributed to key themes in the UCD Strategic Plan.

UCD School of Law is focusing on a wider knowledge exchange programme to share its research with practitioner and policy communities, while UCD School of Business continues to build its Executive Education capabilities following the appointment of a new Director.

UCD College of Business and Law consists of two schools:

College Principal: Professor Ciarán Ó hÓgartaigh

UCD School of Business
Head of School/Dean
Professor Ciarán Ó hÓgartaigh

UCD School of Law
Head of School/Dean
Professor Colin Scott

**As of September 2011*



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1. An Taoiseach, Mr Enda Kenny TD, with students (l-r) Christine Cullen, Christina O'Conner, Ciara McGinley and Aine Casserly at the MSc in Marketing Practice business breakfast
2. Aspire Scholars (l-r) Ronan Cooney, Chloe Barton, Niamh Donnelly and John O'Brien launch the 2012 Aspire scholarship programme
3. Helen Brophy (l), Director of Executive Education at UCD Michael Smurfit Graduate School of Business, and Professor Ciarán Ó hÓgartaigh, Dean, UCD School of Business, launch Executive Edge 2012. Executive Edge showcases UCD Business School's executive education capabilities
4. Pictured (l-r) at the UCD Constitutional Studies Group International Conference are: Professor Imelda Maher; Professor Colin Scott, Dean, UCD School of Law; The Hon. Mrs Justice Susan Denham, Chief Justice; and Professor Philip Pettit, Princeton University
5. Professor Imelda Maher, Ruairi Quinn TD, Minister for Education and Skills, lead donor Peter Sutherland SC, and UCD President, Dr Hugh Brady check progress on the new UCD Sutherland School of Law building
6. UCD Smurfit School CEMS student, Lukas Decker, winner of the Ireland Funds All Ireland Business Plan Competition, with (l) Kieran McLoughlin, President and CEO of Worldwide Ireland Funds, and William S McKiernan, founder of CyberSource and Chair of the judging panel
7. Third year BCL student, Brian McCormick, accepting the Mooting/Debating prize on behalf of UCD School of Law at the Irish Law Awards

UCD College of Engineering and Architecture

www.ucd.ie/eacollege

Strategic plan

UCD College of Engineering and Architecture was established on 1 September 2011, with Professor Gerry Byrne appointed as College Principal. The College vision is to be a global college, addressing global questions which require global solutions. The College's mission is to be a world leader in aspects of engineering and architecture, as well as in international research, teaching and learning. This will be achieved by providing premier national and international programmes. The College also aims to maintain an innovation and design focus through the enhancement and development of existing and new national and international interdisciplinary collaborations and industrial partnerships.

Developments to date

The UCD disciplines of engineering and architecture were both celebrated in 2011. UCD School of Architecture's centenary year was launched in September 2011 by the Minister for Education and Skills, Ruairi Quinn TD (BArch 1969). A commemorative ceiling, listing the School's 2,047 BArch graduates was unveiled, while a new website (www.ucdarchitecture.ie) documents the School's first one hundred years and lists forthcoming events. A celebration of UCD Engineering was held in October 2011, at which Professor David O'Reilly, retired Chairman and CEO of Chevron Corporation, delivered the keynote address: *Can Engineers Save the Irish Economy?*

The College continues to expand its portfolio of international programmes, with one of its two new programmes located in Beijing. This will be delivered in association with Beijing University of Technology, in 2012/13. In November 2011, a Memorandum of Agreement was signed between UCD and TATI University College (TATIUC), Terengganu, Malaysia. This strengthens the collaboration with UCD on a range of Engineering programmes at undergraduate and graduate level, with an initial focus on undergraduate

programmes in Mechanical and Electronic Engineering; students will transfer into UCD programmes from 2012.

Key priority areas for the College are Energy and Design. In this respect a new Master's in Electrical Energy Engineering was introduced last year and two senior academics were recruited in Power Systems Engineering. In the field of Design, in addition to the inclusion of new Design-related modules, the College has developed the Dublin Creative Design Network. This was formed in collaboration with the UCD Schools of Business, and Computer Science and Informatics, and the National College of Art and Design (NCAD), to encourage student awareness of and engagement in design activities across UCD.

Implementation of the UCD Education Strategy continued. This focused on assessment and enhancement of teaching quality by employing a variety of qualitative and quantitative data. UCD School of Architecture completed a major project with UCD Teaching and Learning on the strategic redesign of Stage One assessment. Agreed changes will be implemented for first year students in 2012/13.

A European Research Council (ERC) Starting Independent Research Grant, recently awarded to Dr Eoin Casey, UCD School of Chemical and Bioprocess Engineering, is being utilised, and the College anticipates a further ERC success. The College has also been mobilising a number of PRLT15 programmes which include PhD Fellowships in Telecommunications, Grid Integration of Renewables, Distributed Generation and Flexible Demand, and a new Graduate Research and Education Programme (GREP) in Engineering.

The College continues to strengthen industry links with the appointment of Business Development Managers on the KARIM Project, funded by the EU INNTEREG IVB North West Europe Programme, which will lead to commercialisation of funded projects.

UCD College of Engineering and Architecture consists of six schools:

College Principal/Dean of Engineering: Professor Gerald Byrne
Vice-Principal and Associate Dean of Taught Engineering Programmes: Professor Michael Bruen
Dean of Architecture: Professor Hugh Campbell
Associate Dean of Architecture: Mr Dan Sudhershnan

Vice-Principal for Research and Innovation and Graduate Research School Director: Professor Tony Fagan
Vice-Principal for Teaching and Learning: Professor Colm O'Donnell †
Vice-Principal for Internationalisation and Development: Professor David FitzPatrick

† Appointed December 2011

UCD School of Architecture
 Head of School/Dean
 Professor Hugh Campbell

UCD School of Chemical and Bioprocess Engineering
 Head of School
 Professor Don MacElroy

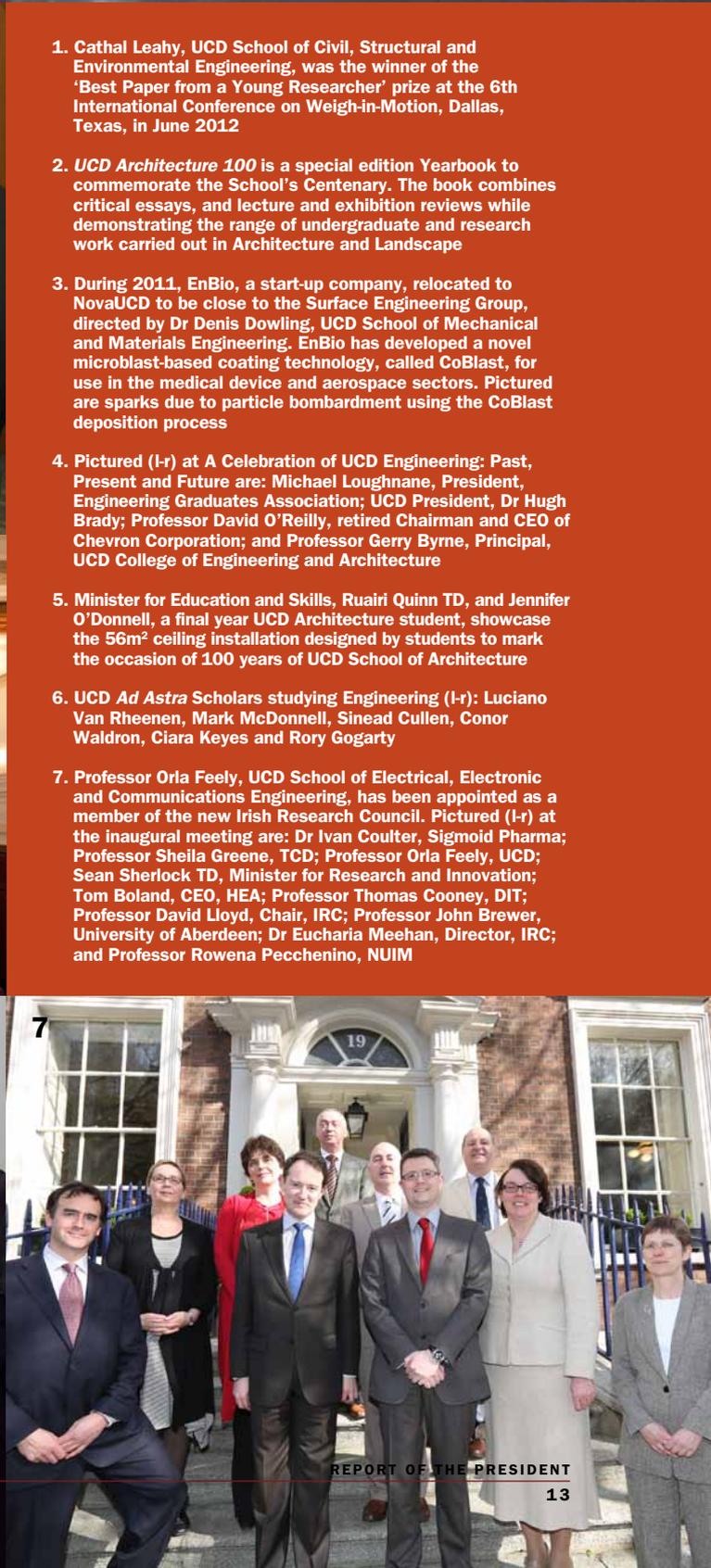
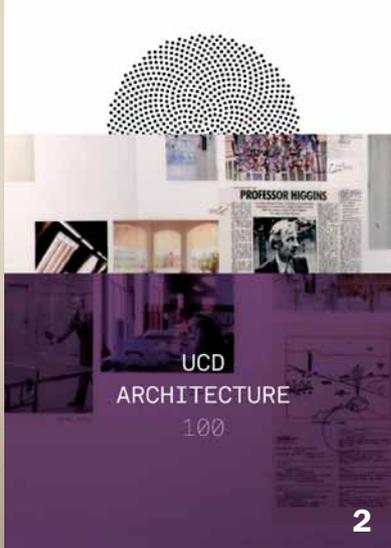
UCD School of Electrical, Electronic and Communications Engineering
 Head of School
 Professor Tom Brazil

UCD School of Biosystems Engineering
 Head of School
 Professor Francis Butler

UCD School of Civil, Structural and Environmental Engineering
 Head of School
 Dr Mark Richardson

UCD School of Mechanical and Materials Engineering
 Head of School
 Professor Michael Gilchrist

*As of September 2011



1. Cathal Leahy, UCD School of Civil, Structural and Environmental Engineering, was the winner of the 'Best Paper from a Young Researcher' prize at the 6th International Conference on Weigh-in-Motion, Dallas, Texas, in June 2012
2. *UCD Architecture 100* is a special edition Yearbook to commemorate the School's Centenary. The book combines critical essays, and lecture and exhibition reviews while demonstrating the range of undergraduate and research work carried out in Architecture and Landscape
3. During 2011, EnBio, a start-up company, relocated to NovaUCD to be close to the Surface Engineering Group, directed by Dr Denis Dowling, UCD School of Mechanical and Materials Engineering. EnBio has developed a novel microblast-based coating technology, called CoBlast, for use in the medical device and aerospace sectors. Pictured are sparks due to particle bombardment using the CoBlast deposition process
4. Pictured (l-r) at A Celebration of UCD Engineering: Past, Present and Future are: Michael Loughnane, President, Engineering Graduates Association; UCD President, Dr Hugh Brady; Professor David O'Reilly, retired Chairman and CEO of Chevron Corporation; and Professor Gerry Byrne, Principal, UCD College of Engineering and Architecture
5. Minister for Education and Skills, Ruairi Quinn TD, and Jennifer O'Donnell, a final year UCD Architecture student, showcase the 56m² ceiling installation designed by students to mark the occasion of 100 years of UCD School of Architecture
6. UCD *Ad Astra* Scholars studying Engineering (l-r): Luciano Van Rheenen, Mark McDonnell, Sinead Cullen, Conor Waldron, Ciara Keyes and Rory Gogarty
7. Professor Orla Feely, UCD School of Electrical, Electronic and Communications Engineering, has been appointed as a member of the new Irish Research Council. Pictured (l-r) at the inaugural meeting are: Dr Ivan Coulter, Sigmoid Pharma; Professor Sheila Greene, TCD; Professor Orla Feely, UCD; Sean Sherlock TD, Minister for Research and Innovation; Tom Boland, CEO, HEA; Professor Thomas Cooney, DIT; Professor David Lloyd, Chair, IRC; Professor John Brewer, University of Aberdeen; Dr Eucharia Meehan, Director, IRC; and Professor Rowena Pecchenino, NUIM

UCD College of Health Sciences

www.ucd.ie/chs

Strategic plan

Formed on 1 September 2011, the College comprises three schools: UCD School of Medicine and Medical Science; UCD School of Nursing, Midwifery and Health Systems; and UCD School of Public Health, Physiotherapy and Population Science. Together they have maintained and advanced the College's reputation as a centre of excellence in healthcare education. This was achieved through programme development, the introduction of new graduate programmes, improvements in the student experience, and the adoption of innovative technology and teaching methods.

The College is a major contributor to the UCD strategic research theme of Health and Healthcare Delivery and has substantially increased its research activity. In line with the strategic aim of increasing international student numbers, a new Summer School programme attracted students from a number of US universities.

Developments to date

UCD School of Medicine and Medical Science successfully completed external, undergraduate accreditation reviews by the Irish Medical Council and the Irish Institute of Radiography and Radiation, with programmes being highly commended for the curricular reform that took place during previous reporting cycles.

In the governance structures for the new College, Head of School and Dean of Nursing, Dr Martin McNamara, became a member of the new College Executive. Dr McNamara was the Irish University Association representative on the national review of the nursing and midwifery degrees.

UCD School of Nursing, Midwifery and Health Systems continued to build on its strengths in the area of taught graduate studies and was successful in the first national competitive tender to deliver a Master of Science in Nursing (Advanced Practice: Gastroenterology), in association with St Vincent's University Hospital.

UCD School of Medicine and Medical Science advanced its investigator-led research portfolio, with over 200 research-active

staff with grants under management worth approximately €94 million. Clinical research activity also continued to grow within the UCD Clinical Research Centres at Mater Misericordiae University Hospital and St Vincent's University Hospital. The School now sponsors eight clinical trial projects and supports more than 75 active investigator-led studies.

In addition to the €1.03 million, secured by the National Centre for the Protection of Older People, funding to the value of €180K was secured by Professor Abbey Hyde, UCD School of Nursing, Midwifery and Health Systems, to conduct a study of the sexual health and sexual education needs of young people in care in Ireland.

Dr Tara Cusack, of UCD School of Public Health, Physiotherapy and Population Science, received a Dublin Region Higher Education Alliance (DRHEA) Teaching Fellowship, and Professor Richard Tremblay was elected Fellow of the American Association for the Advancement of Science. Ms Susan Murphy, PhD student, was the winner of the Irish Pain Society Research Scholarship, and was also 2012 winner of the Irish Society of Chartered Physiotherapy O'Driscoll O'Neill Research Bursary.

Two UCD School of Public Health, Physiotherapy and Population Science students, who are part of the UCD *Ad Astra* Elite Athlete programme, participated in the London 2012 Olympics: Arthur Lanigan O'Keeffe (Modern Pentathlon) and Annalise Murphy (Sailing).

The UCD School of Medicine and Medical Science, in partnership with RCSI, took full joint ownership of the Penang Medical College, an important step in cementing UCD's presence in Malaysia, which has existed for over 25 years. Such overseas clinical/research elective opportunities have also been developed with institutions including Quinnipiac University, University of Queensland and Harvard Medical School.

In the last academic year, UCD School of Public Health, Physiotherapy and Population Science has signed a school-level Memorandum of Understanding with both Shenzhen University (SZU) and Shanghai University of Sport.

UCD College of Health Sciences consists of three schools:

College Principal: Professor Maurice Boland

UCD School of Medicine and Medical Science

Head of School/Dean
Professor William Powderly

UCD School of Nursing, Midwifery and Health Systems

Head of School/Dean
Dr Martin McNamara

UCD School of Public Health, Physiotherapy and Population Science

Head of School/Dean of Public Health
Professor Cecily Kelleher

Dean of Physiotherapy

Dr Deirdre Hurley-Osling

**As of September 2011*



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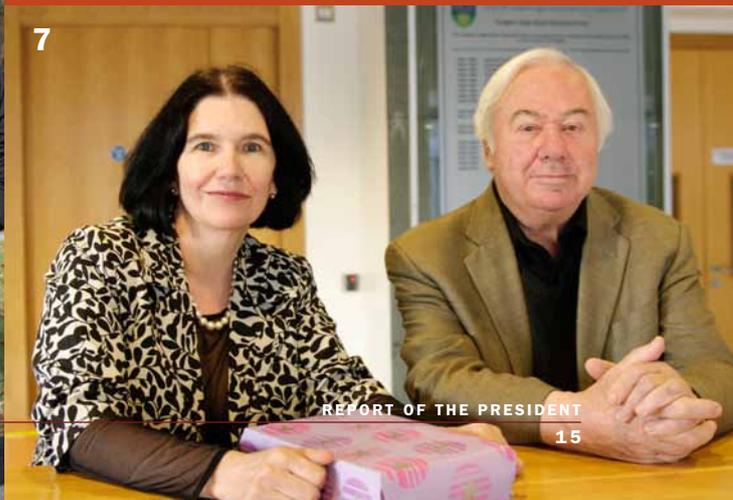
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1. UCD Medicine students with Professor Bill Powderly, Dean of Medicine, at the White Coat Ceremony, January 2012, which celebrates the start of student clinical training
2. Pictured (l-r) at the launch of the report on *Enabling Recovery: The Benefits of Supporting Socialisation*, in June, are: Dr Jonathan Drennan, UCD School of Nursing, Midwifery and Health Systems; Kathleen Lynch TD, Minister of State, Department of Health and Department of Justice, Equality and Defence; Dr Ann Sheridan, UCD School of Nursing, Midwifery and Health Systems; and Dr Martin McNamara, Dean of Nursing
3. Pictured (l-r) are: Mary Anne Kenny, Deputy Editor, *Irish Medical Times*; Valerie Toe, UCD Medicine student and winner of the Summer Student Research Award gold medal; and Professor Michael Keane, Head of Medicine and Medical Specialties, UCD School of Medicine and Medical Science
4. Dr David O'Connor, Chairman, the Institute of Biology of Ireland, presents the award for highest Leaving Certificate points in Biology to John McCormick, Stage One Medicine and UCD *Ad Astra* Scholar
5. Professor Bill Powderly, Dean of Medicine, with students from Penang Medical College, at the farewell ceremony to mark their return to Malaysia
6. Keith Wood, international rugby player and guest speaker (centre) with UCD School of Public Health Physiotherapy and Population Science students: Paul Joyce, Elma Beirne, Emer O'Connell and Zhuo Chen, on the Rugby Club and Union Operations Module (MSc Sport and Exercise Management 2011/12)
7. Professor Cecily Kelleher, Dean of Public Health, with Professor David Barker, Professor of Epidemiology, Southampton University, who delivered a lecture entitled *The First 1000 Days: Policy Implications for Maternal and Child Health* organised by UCD School of Public Health Physiotherapy and Population Science

College of Human Sciences

www.ucd.ie/humanosciences

Strategic plan

UCD College of Human Sciences plays a key role in delivering the ambitions of UCD's Strategic Plan to 2014 *Forming Global Minds*. It contributes to the regeneration of economic prosperity, develops new knowledge and challenges accepted truths. In the academic year 2011/12, the College enhanced its research addressing the challenges facing Ireland and the wider world by focusing on such critical issues as the reform of political structures, the banking system and national finances in crisis, sustainability, youth mental health and interventions for disadvantaged children. The increased range of masters and doctoral programmes serves to build the expertise and leadership required to tackle these challenges, while undergraduate programmes continue to be particularly successful in attracting a diverse student body contributing to the University's goal of widening participation. The University's internationalisation agenda continues to be pursued at all levels by the College, notably in the USA and China.

Developments to date

A number of new initiatives focused on the BA programme, delivered jointly with UCD College of Arts and Celtic Studies, including the appointment of a Student Engagement Officer, the introduction of peer mentoring, and the piloting of a new first year module on Learning for Success at University. At graduate level, a new cross-disciplinary Master's in Public Policy was developed, together with a number of new discipline-specific taught programmes. A five year MSc in Maths, Science and Education, a new approach to the preparation of post-primary teachers, was developed in collaboration with UCD College of Science.

A range of exciting new research projects was initiated during the year. The European Commission Seventh Framework Programme is funding a major collaborative project on urban resilience and another on sustainability and ecosystem research

applications, as well as funding incoming scholars. Significant funding was won from IRCHSS under its 'New Ideas', Research Fellowship and Postdoctoral Fellowship schemes, and also from many other national and international sources, ranging from the Departments of Foreign Affairs and Children and Youth Affairs, to the German Research Foundation and the Leverhulme Trust.

During the year the College and its constituent schools organised a number of prestigious seminars and conferences. The first UCD Garret FitzGerald Spring School on the theme *Democracy in the 21st Century* was addressed by the former President of Ireland, Mary Robinson, with presentations by Professor David Marquand (Oxford), Professor Conor Gearty (LSE) and Baroness Onora O'Neill (Cambridge). A conference on *Inequality and Poverty in Boom and Bust* included a guest lecture by Professor Sir Tony Atkinson on 'Income Inequality and Financial Crises'. The *8th International Conference on Urban Climate* was held at UCD, and other major conferences were organised on themes including: *Law, State and Religion* (in honour of the Iranian Nobel Laureate, Dr Shirin Ebadi); the philosopher Wilfrid Sellars; *Stigma and Youth Mental Health*; *The Geopolitics of Peace and Conflict in Colombia, Kurdistan, Northern Ireland and Sri Lanka*; *The Challenge of Cross-Border Cooperation in Healthcare Provision*; *Changing Universities: Changing Sociology*; and *Health in Crisis*?

Professors John Coakley and Richard Sinnott were elected to the Royal Irish Academy, while Dr Joseph Cohen was awarded a Chevalier de l'Ordre des Palmes Académiques by the French government. Professor Alun Jones was elected to the Academia Europaea (Academy of Europe). Dr Orla Doyle was awarded the Barrington Prize by the Statistical and Social Inquiry Society of Ireland, and Professor Maeve Cooke received a Fulbright Irish Scholar Award.

UCD College of Human Sciences consists of ten schools:

College Principal: Professor Brian Nolan
Director of Graduate School: Dr Jos Elkind

Vice-Principal for Teaching and Learning: Dr Barbara Dooley
Vice-Principal for Research and Innovation: Professor Alun Jones

UCD School of Applied Social Science

Head of School
Professor Bryan Fanning

UCD School of Geography, Planning and Environmental Policy

Head of School
Professor Zorica Nedovic-Budic

UCD School of Politics and International Relations

Head of School
Professor David Farrell

UCD School of Sociology

Head of School
Professor Sinisa Malesevic

UCD School of Economics

Head of School
Professor David Madden

UCD School of Information and Library Studies

Head of School
Professor Diane Sonnenwald

UCD School of Psychology

Head of School
Dr Ellis Hennessy

Dean of Arts

Dr Joe Brady

UCD School of Education

Head of School
Professor Ciaran Sugrue

UCD School of Philosophy

Head of School
Professor Maria Baghramian

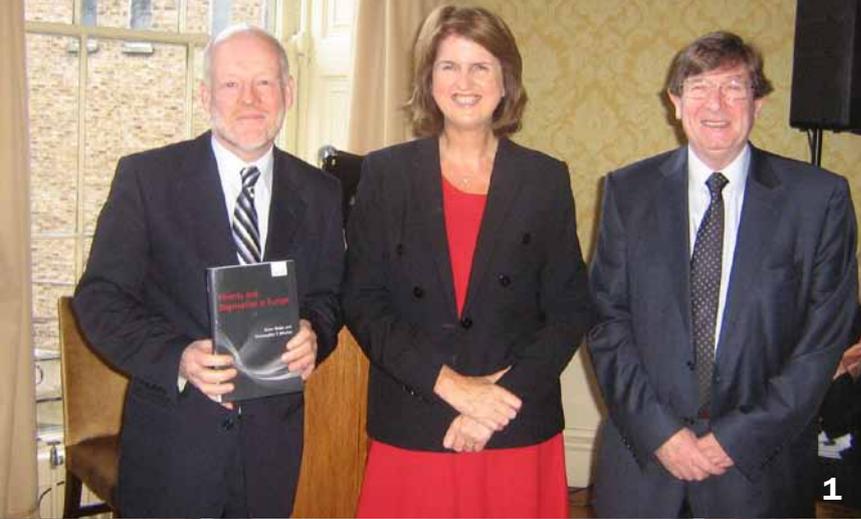
UCD School of Social Justice

Head of School
Professor Kathleen Lynch

Dean of Social Science

Professor Suzanne Quinn

*As of September 2011



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1. At the conference *Poverty and Inequality in Boom and Bust* organised by UCD College of Human Sciences, January 2012, Minister for Social Protection, Joan Burton TD, launched *Poverty and Deprivation in Europe*, by Professor Brian Nolan, College Principal, and Professor Christopher T Whelan, UCD School of Sociology
2. Professor David Farrell, Head of UCD School of Politics and International Relations, at the launch of the *We the Citizens* initiative report, December 2011
3. Pictured are delegates at the 8th International Conference on Urban Climate, August 2012, with Dr Gerard Mills (l), UCD School of Geography, Environmental Policy and Planning, and President of the International Association for Urban Climates
4. Olivia O'Leary, described in the citation as 'one of the country's most respected journalists and most loved commentators', was awarded an honorary doctorate by UCD, December 2011
5. Farid Ouabdesselam, President of the Joseph Fourier University, Grenoble, awards the Honorary Doctorate Award Toga to Professor Anne Buttimer, Emeritus Professor at UCD School of Geography, Planning and Environmental Policy, January 2012. Professor Buttimer is the first woman and the first human scientist to receive this award from the Joseph Fourier University
6. Dr Amanda Fitzgerald and Dr Barbara Dooley, UCD School of Psychology, at the launch of the My World Survey on youth mental health, organised by the School and by Headstrong, the National Centre for Youth Mental Health

UCD College of Science

www.ucd.ie/science

Strategic plan

The College was established in 2011 and covers core and applied science disciplines. In Teaching and Learning the aim is to create a portfolio of degree choices fit for the 21st century, which will attract the best students. The College is committed to providing an excellent university experience and to widen participation of students from non-traditional backgrounds. Scientific research represents an essential pillar of the College, which acts as a facilitator to support its schools and associated interdisciplinary research institutes in early discovery, innovation and downstream application. These are all equally necessary to develop potential future impacts which will benefit education, industry and society.

Developments to date

Responding to the changing needs of science education, the College restructured its undergraduate BSc curriculum. This offers students a greater opportunity to sample a number of subjects before deciding which to pursue. The UCD DN200 Science common entry programme saw a significant increase in first preferences, from 234 (2008) to 602 (2012), an increase of over 250%, matched by a rise in CAO points from 300 (2008) to 500 (2012).

The College developed the following initiatives to enhance the undergraduate Science student experience: a Peer Mentoring Awards scheme, which acknowledges those students who excel in their role; Peer Assisted Learning (PAL), which offers educational gain for both the students who are mentoring and those who are mentored; an Awards Programme under the categories of academic achievement, leadership, personal achievement and peer mentoring; Parents Evening; and enhanced Student Advisory Services.

At graduate level the College placed increased emphasis on taught master's programmes. In 2011/12, Science offered 44 graduate taught and 37 graduate research majors. The Master's by Negotiated Learning programmes maintained their popularity and are now offered in Computer Science, Physics and Chemistry.

The success of these programmes was confirmed when the MSc in Computer Science by Negotiated Learning was announced as the outright winner of the GradIreland 2012 Postgraduate Programme of the Year Award for IT. Despite postgraduate research degree programmes and postdoctoral opportunities being negatively impacted by the overall decline in available research funding, overall total postgraduate student numbers (taught and research) increased from 938 in 2011, to 1,121 in 2012.

Principal Investigators in the College attracted prestigious national funding. This comprised Science Foundation Ireland (SFI) PI Awards and highly competitive International funding, including European Research Council (ERC) Grants and FP7 funding. Overall, approximately 180 grants were registered for Science in 2011/12, raising over €22 million.

Successful engagement with industry brought added support to the College. This ranged from studentships and postdoctoral funding to Tullow Oil's agreement to fund two Lectureships and one Professorship in Petroleum Geoscience. The biotechnology company, Elan, is also funding a Professorship in Business and Biotechnology.

Such achievements show that the College's research and expertise make a valuable contribution to major global questions and industry needs. The College's research findings were captured in over 500 peer-reviewed papers published during the year, including high ranking journals such as *Nature* and *Science*. Academics also featured repeatedly in Irish and international media, including articles in *The Irish Times* and on RTE. The impact of UCD's Physics research was assessed to be 3.3 times the global average in its field.

In 2011/12 several patent applications were progressed, one spin-out company created and seven licensing agreements registered with the University's knowledge transfer unit, Nova UCD. Two CLARITY start-ups (Wattics and Yokie) were featured as 'Start-Ups of the Day' in the *Daily Business Post*.

UCD College of Science consists of seven schools:

College Principal/Dean: Professor Joe Carthy
Director of Graduate School: Dr Mary Kelly-Quinn
Vice-Principal for Teaching and Learning: Dr Kathy O'Boyle
Vice-Principal for Research and Innovation: Dr Cormac Murphy

Associate Dean of Science: Professor Peter Duffy
Associate Dean for International Study: Professor Jeremy Simpson
Associate Dean for International Study (North America): Dr Tadhg Ó'Cróinín
Associate Dean for Widening Participation: Dr Francesca Paradisi

UCD School of Biology and Environmental Science
Head of School
 Dr Thomas Gallagher

UCD School of Chemistry and Chemical Biology
Head of School
 Professor Patrick Guiry

UCD School of Geological Sciences
Head of School
 Professor Stephen Daly

UCD School of Physics
Head of School
 Professor Lorraine Hanlon

UCD School of Biomolecular and Biomedical Science
Head of School
 Dr Gethin McBean

UCD School of Computer Science and Informatics
Head of School
 Mr John Dunnion

UCD School of Mathematical Sciences
Head of School
 Dr Patrick Murphy

**As of September 2011*



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1. An Taoiseach, Mr Enda Kenny TD, with PhD student Bairbre Woods at the opening of phase one of the Science Centre



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2. Pictured (l-r) at the September 2011 launch of UCD Rosemount Environmental Station are: Joanna Kacprzyk, PhD student UCD School of Biology and Environmental Science; Simon Coveney TD, Minister for Agriculture, Food and Marine; and Rosanna Hennessy, PhD student UCD School of Biology and Environmental Science

3. Pictured carrying out scientific research fieldwork on Hekla Volcano, Iceland, is Professor Chris Bean, Professor of Geophysics and Director of UCD's Earth Institute, who is an expert on natural hazards, volcanic eruptions and dangerous environments

4. Pictured is Dr Andrew Phillips (r) and his research group in UCD School of Chemistry and Chemical Biology, where they research greener chemistry

5. The 2nd place winner in the UCD Images of Research Competition was *Looking for SARS*, by Dr Sebastien Puechmalle, UCD School of Biology and Environmental Science. This picture was taken in a cave near a Buddhist temple in Western Thailand, and shows Rd Meriadeg Ar Gouilh, Pasteur Institute, Paris, and Dr Puechmalle setting up equipment to screen bats for the presence of SARS-Coronaviruses (Severe Acute Respiratory Syndrome). Results suggest that bats are resistant to SARS-Coronaviruses and studying their resistance will help to develop remedies against a virus that can be lethal for humans

6. *Digital Organic*, the 3rd place winner in the UCD Images of Research Competition, was by Dr Miguel Nicolau, UCD School of Computer Science and Informatics, and UCD CASL. Evolutionary Computation is a research field that uses computers to breed solutions, using principles taken from natural evolution. This image evolved for a logo competition at the CASL laboratory in UCD, which it won

7. At the announcement of the SFI Principal Investigator Programme awards, in which 10 of 30 awards went to projects headed up by UCD researchers, were Richard Bruton TD, Minister for Jobs, Enterprise and Innovation, and Professor Patrick Guiry, UCD School of Chemistry and Chemical Biology, and Centre for Synthesis and Chemical Biology



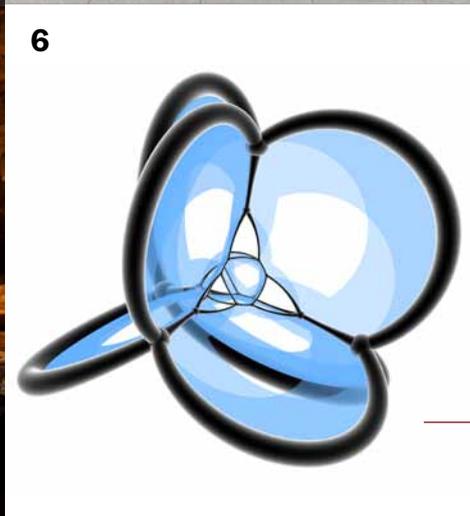
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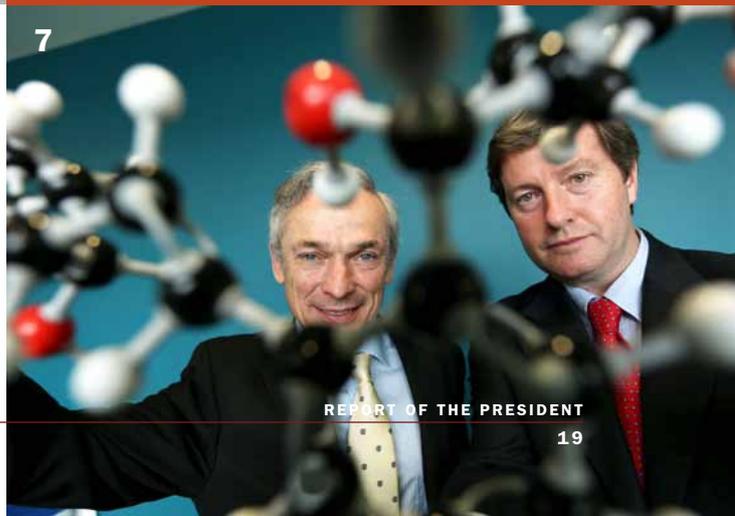
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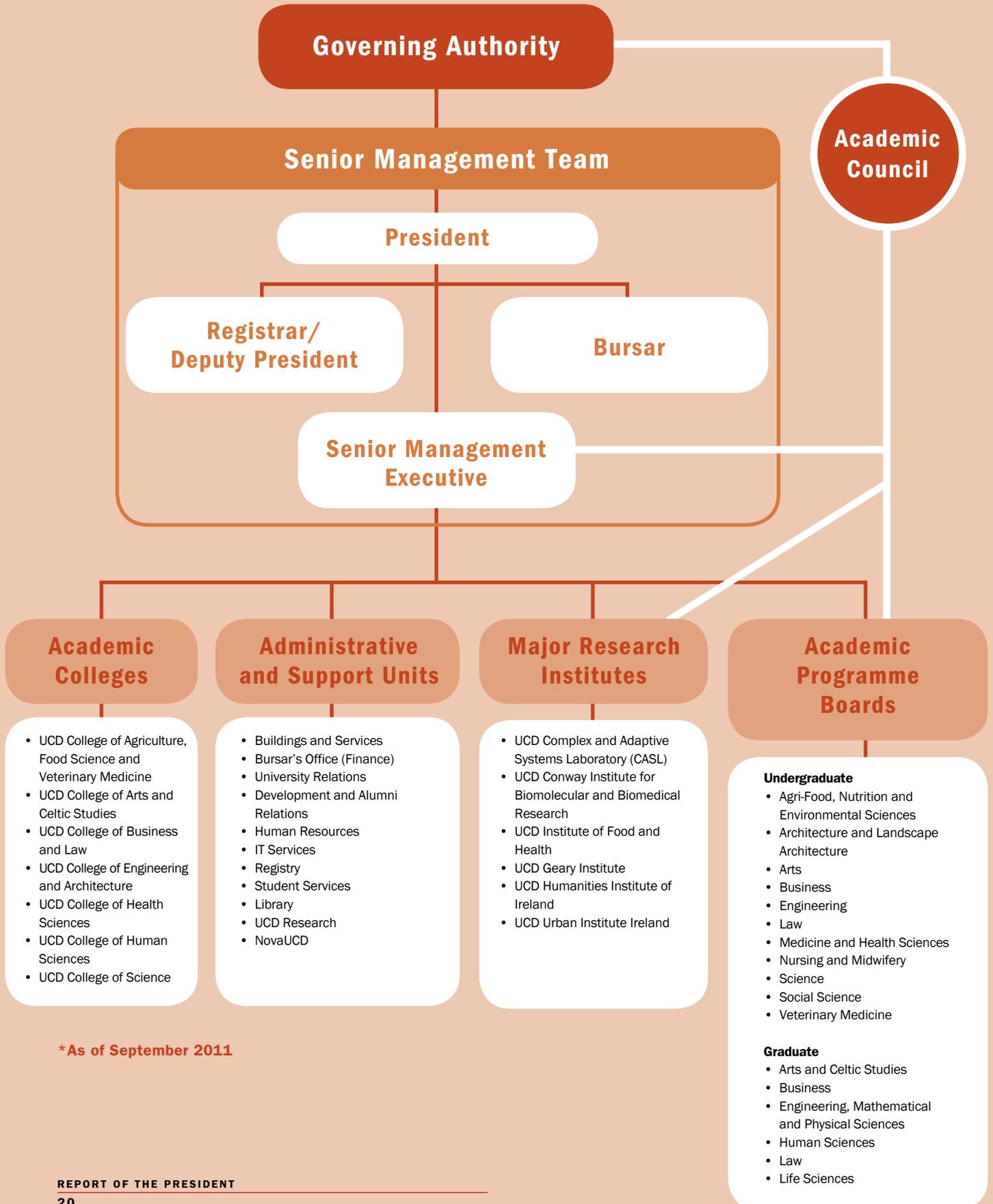


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University Organisational Structure



*As of September 2011

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EDUCATION

In support of the UCD Strategic Plan to 2014 *Forming Global Minds*, a range of University-wide initiatives was implemented to meet UCD's ambitious strategic objectives in the area of teaching and learning. Areas that saw significant progress included: initiatives to foster early and lasting student engagement; formative and summative evaluation of student experience; and engagement to identify aspects for improvement inside and outside the classroom.

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Stimulating Creativity, Innovation, Entrepreneurship and Active Citizenship	24
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Profile of Student Body

Despite difficult external economic factors, UCD's total student population grew by 1.3% between 2010/11 and 2011/12. Increases were achieved in key strategic student population cohorts including graduate students (2.8% increase) and international students (9% increase). See table 1.

For 2012 entry, UCD retained its top position as the university of first choice in Ireland, with CAO first preferences rising by over 10% to 2,231. The minimum CAO points for most entry routes in UCD also rose, with 17 courses increasing by more than 25 points, reflecting the rise in first preferences. The impact of the bonus points for higher mathematics on this rise requires detailed analysis.

Table 1: Student Profile 2011/2012

	2011/2012			2011/2012			% International	Total Conferred 2010/2011
	Full-time	Part-time	TOTAL	Irish	Non-Irish	TOTAL		
Honours Degree	14,793	278	15,071	13,370	1,701	15,071	11.3%	2,896
Certificate/Diploma	138	937	1,075	1,014	61	1,075	5.7%	703
Occasional	611	89	700	88	612	700	87.4%	-
Exchange	886	-	886	51	835	886	94.2%	-
Total Undergraduate	16,428	1,304	17,732	14,523	3,209	17,732	18.1%	3,599
Doctorate	1,598	154	1,752	1,065	687	1,752	39.2%	234
Master's Research	174	40	214	167	47	214	22.0%	45
Master's Taught	2,209	1,179	3,388	2,470	918	3,388	27.1%	2,150
Certificate/Diploma	560	1,061	1,621	1,387	234	1,621	14.4%	1,088
Continuing Professional Development	-	226	226	205	21	226		
Total Graduate	4,541	2,660	7,201	5,294	1,907	7,201	26.5%	3,517
UCD Total	20,969	3,964	24,933	19,817	5,116	24,933	20.5%	7,116

Fostering Early and Lasting Student Engagement

Following the work of the previous two years, the focus for 2011/12 remained on achieving early and lasting student engagement. Particular emphasis was placed on the first year of the student lifecycle. The initial part of a major First Year Assessment project to review and reform assessment strategies for first year students took place. This project follows an earlier analysis of institutional assessment data which provided insights on the volume, range and timing of student assessment. Veterinary Medicine, Social Science, Architecture, Medicine and Medical Science (Radiography) and Science (Physics), supported by UCD Teaching and Learning, reviewed their assessment strategies, in order to link them to the overall learning outcomes and attributes expected of their students. Workshops helped to identify how best to facilitate active, high quality student learning in first year modules while also streamlining staff work in designing assessment, grading and providing feedback.

Changes will be implemented in these schools and programmes from September 2012, and will then be expanded to additional programmes.

UCD Teaching and Learning conducted a review of Orientation 2011, collating contributions from academic and support staff involved in planning and leading orientation activities for incoming first year students, both centrally and within the programmes/schools. Examples of good practice and suggested improvements will be included in Orientation 2012/13.

The UCD *Ad Astra Academy* was established in 2011, to attract and support elite students. The Academy offers unique opportunities and support including individual academic mentoring. Sixty-five scholars were admitted to the Academy in September 2011: 39 Academic, 17 Elite Athletics and 9 Performing Arts.



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1. UCD *Ad Astra* Performing Arts scholars before a recital at the John Field Room, National Concert Hall, February 2012
2. Susan McAlinden, UCD International, with Richard Burton TD, Minister for Jobs, Enterprise and Innovation, at a student recruitment Fair in Riyadh, Saudi Arabia, promoting UCD study opportunities
3. UCD students participating on a UCD Careers Development Centre-led Corporate Finance Study Visit to London, in March 2012, to visit leading companies in the sector
4. Students present final year projects to recruiters at the 2012 Computer Science Opportunities Day, April 2012, hosted by UCD Careers Development Centre
5. UCD *Ad Astra* academic scholar, Robyn De Brun, with academic mentor Dr Eilis Hennessey, UCD School of Psychology
6. Registrar, Professor Mark Rogers, opens a symposium entitled *The Life Cycle of the Student - How It All Links Together*. The event, organised by UCD Registry in collaboration with University colleagues, gave delegates the opportunity to showcase new developments, highlight examples of good practice and explore issues around the provision of administration-related information to students
7. The new, full library catalogue search facility, developed by IT Services in conjunction with UCD Library through the UCD Mobile application, allows students to browse the library catalogue and find journals on their smartphones

Strengthening and Enhancing Academic Disciplines and Programmes

Through its annual review, UCD Teaching and Learning support for schools and programmes continues to develop with the availability of new data on registration to programmes, progression and grade distributions.

In 2011, the UCD Student Feedback on Modules system was formally embedded in the review of module design and delivery, with an additional focus placed on 'closing the feedback' loop. The objective is to design simple but effective methods of communicating to students the actions taken by schools and colleges on foot of the student feedback on modules.

In 2011/12, emphasis was placed on increasing student response rates for the Student Feedback on Modules system. Students from the UCD Marketing and Development Programme worked to promote survey completion and develop a sense of shared responsibility with staff for improving UCD's educational offerings. This combined marketing expertise with a student perspective. The Findings from Students of UCD with Regards to their Attitudes, Perceptions and Motivation for Participation in the Student Feedback on Modules Surveys was published in the Student Feedback on Modules Marketing and Rebranding Report.

Stimulating Creativity, Innovation, Entrepreneurship and Active Citizenship

UCD continues to educate Ireland's future economic, political and social leaders, preparing them to participate in national and international developments in industry, the arts and in building strong and cohesive communities.

Both academic and support services engage with students in areas such as Personal and Career Development Planning, Internships and other industry-education engagements. These develop self-confident and self-aware students who will apply entrepreneurial attitudes and innovation to self-employment or when working for others. In 2011/12, UCD Careers Development Centre provided a range of developmental interactions comprising seminars, workshops and events which were developed to enhance graduate attributes, including problem solving, creative thinking, emotional intelligence, networking and negotiation skills.

Innovation and entrepreneurship training, which foster creativity and critical thinking is also offered through UCD's *Innovation Academy* with a joint TCD/UCD Graduate Certificate for PhD students, and other modules for graduate students. UCD was awarded funding to offer a Springboard Graduate Certificate to unemployed graduates, which saw 145 places taken across two programme areas in 2011. It is anticipated that 300 places will be offered across four programme areas for 2012/13.

UCD places great importance on developing its students as active citizens. Students and staff engage locally, nationally and internationally in volunteer activities, in humanitarian projects and in research that benefits individuals and society. In 2011/12, UCD initiated collaboration on the development of a volunteer management system to encourage voluntarism and civic engagement among University students, partnering with the CampusEngage Network and Volunteer Ireland.

Growing and Developing Graduate Education

In 2011/12, graduate students made up 28.9% of the total UCD student population (see table 2), with a significant uptake in Computer Science, which has proved particularly popular due to the flexibility of the Master's by Negotiated Learning. This programme received Postgraduate Course of the Year at the GradIreland 2012 awards.

In line with UCD's objective to grow and develop graduate education, 54 new graduate taught programmes were approved to commence in September 2012. The graduate student recruitment strategy is being implemented for 2012/13, which

will support schools and programmes in maximising existing opportunities and offering increased flexibility within UCD's graduate taught portfolio.

UCD Graduate Studies has further developed the Transferable Skills Programme offered to graduate research students. Additions to the programme include workshops on Research Integrity, Reflective Learning, Working with Supervisors, and Getting the Most from Research and Professional Development Planning. This workshop-based programme will also see the launch of a new student interface and online registration system for 2012/13.

UCD's collaboration with the National Academy for Integration of Research, Teaching and Learning (NAIRTL), on Research Supervisor Support and Development, led to the launch in June 2012 of the publication: *Developing an Institutional Framework for Supporting Supervisors of Research Students*. This practical guide documents the outcome of a unique inter-institutional project undertaken between 2008 and 2012, to develop a common national framework for the support of supervisors of graduate research students.

UCD is currently liaising with partner universities in Universitas 21 to organise the U21 Graduate Research Conference on Energy, which will be hosted by UCD in June 2013.

Table 2: Graduate numbers

Strategic Plan Target: 33%

	2009/10	2010/11	2011/12
Graduate Taught	4,792	5,051	5,235
Graduate Research	2,103	1,956	1,966
UCD Total	24,225	24,625	24,933
% Graduate	28.5%	28.5%	28.9%

Internationalising the Student Experience

UCD's International student community grew to over 5,000 in 2011/2012 (see table 3), with increased enrolments from Canada (15%), USA (17%) and Russia (28%). The list of UCD's exchange destinations saw the addition of the University of Western Australia, the Université de Montréal, Universidad Panamericana, Texas A&M University, Middle East Technical University, Eötvös Loránd University and Vienna University of Applied Science. There was a 7% increase in UCD students participating in non-European exchanges and an 8% increase in participation in the Erasmus exchange programme.

In 2011, UCD established the UCD North American Office. Key outcomes have been encouraging and these include a 36% increase in undergraduate applications and a 75% increase in enrolments. There is a two year recruitment cycle in the US, so the full impact of the initiative will not be apparent until 2013/14, at the earliest. Equipped with new innovative programmes, the University is well positioned for continued growth, especially in the full-degree undergraduate market. The University has developed a range of new programmes targeted at this market.

UCD's student population, both Irish and international, fully embraced the UCD Global Lounge in 2011/2012, with over 10,000 visitors using this new resource in its first year of operation. Events celebrated in the Lounge included the Chinese New Year, Australia Day, Iranian New Year and the Spanish National Day. The Lounge also offered weekly events including open mic. sessions, themed movie nights and international career seminars organised by UCD Career Development Centre.

Table 3: International students

Strategic Plan Target: 25%

	2009/10	2010/11	2011/12
International Students	4,645	4,693	5,116
Non-EU Nationality	2,569	2,635	2,936
UCD Total	24,225	24,625	24,933
% International	19.2%	19.1%	20.5%

Widening Participation and Supporting Lifelong Learning

UCD established a new UCD Widening Participation (WP) Committee, chaired by Professor Brian Nolan, Principal, UCD College of Human Sciences. The Committee offers advice and monitors progress towards the achievement of widening participation, as well as further embedding this activity across the University's core business. The Committee will identify issues pertaining to the University's policies and practices, vis-a-vis under-represented students, from pre-entry to successful completion.

In December 2011, the HEA granted significant additional funding to the Dublin Region Higher Education Alliance (DRHEA)

Widening Participation Strand. The Strand is chaired by Ms Anna Kelly, Director, UCD Access and Lifelong Learning, and this funding will support the establishment of clear progression pathways through, and access routes to, higher education from further education in the region.

UCD Access Centre secured funding from Citi Foundation to develop the Future You Mentoring Project, which involves undergraduates and 5th year school pupils from Tallaght, Ballyfermot, Clondalkin and Crumlin. UCD's Adult Education Widening Participation Sponsorship Programme was established to

give adult learners the opportunity to participate in the UCD Mature Years Access programme in 2012/13. This initiative will enable an increasing number of students to study in UCD next year.

An Access Reporting Tool has been developed in the University by Access and Lifelong Learning, and the Management Services Unit. In developing this reporting system, some categories of under-represented student groups are redefined in accordance with the HEA policy (i.e. Mature Years). The reports provide early data to track and monitor participation, retention and progression of targeted students from under-represented groups. The University achieved a participation rate of 23% at undergraduate level, against its stated strategic participation target of 25%. In addition, there is a steady increase in participation at undergraduate degree level (see table 4). Of some concern, however, is the decline in the numbers of part-time students studying at undergraduate certificate and diploma levels, (see table 4).

Table 4: Under-represented undergraduate new entrants

Strategic Participation Target: 25% at undergraduate level			
	2009/10	2010/11	2011/12
HEAR Scheme Students	104	127	169
Students with Disability (Including DARE)	152	145	176
Mature Students (+23, no previous level 8 qualification)	192	188	172
Part-time Undergraduate Degree Students	55	63	12
FETAC	35	49	44
Total Under-Represented Undergraduate Degree New Entrants	538	572	573
Part-time Certificate & Diploma Students	368	435	372
Adult Education Students	389	348	173
Total Part-time	757	783	545
% of all Undergraduate New Entrants	24.8%	26.8%	23%

Teaching, Learning Innovation and Academic Development

In 2011, UCD Teaching and Learning reformed the professional qualifications in University Teaching and Learning, in recognition of the demands on academic staff time. The new Professional Certificate (15 ECTS credits) and Professional Diploma (30 ECTS credits) in University Teaching and Learning will continue to offer academics opportunities to review and improve their teaching skills, as well as their understanding of approaches and theories in effective higher education.

UCD staff have been recognised in prominent national and international competitions for excellence in teaching and learning.

Awards in 2011/12 include:

- Dr Tara Cusack, UCD School of Public Health, Physiotherapy and Population Science, was awarded one of the inaugural

DRHEA Teaching Fellowships. Dr Cusack has been working with four other colleagues from across the DRHEA on a cross-institution project to enhance the first year learning experience.

- Dr Geraldine O'Neill, UCD Teaching and Learning, was awarded one of the first Universitas 21 Teaching and Learning Network Staff Fellowships. Dr O'Neill is building on UCD's strategic Assessment Redesign Project through an involvement in a similar institutional project in the University of Nottingham.
- Dr Lorraine McGinty and colleagues in UCD School of Computer Science and Informatics, were awarded a National Academy for Integration of Research, teaching and Learning (NAIRTL) grant to support the activities of the MSc in Computer Science by Negotiated Learning.

Quality

UCD delivered a formal report on its follow-up action plan, one year on from its March 2011 review by a team of six independent national and international reviewers. This action plan was to address the Review Report's recommendations to enhance the institution's provision. It was accepted by the Management Board of the Irish Universities Quality Board (IUQB) in March 2012.

In May 2012, UCD hosted a meeting with senior managers from the newly established Qualifications and Quality Assurance

Authority of Ireland (QQAI) to discuss a range of quality-related issues at national and institutional level.

As part of UCD's ongoing commitment to enhance the student experience, provide academically excellent programmes and support teaching and learning through the provision of high quality, reliable and user-friendly academic, administrative and student support services, eight UCD units underwent quality assurance reviews by external Review Groups during 2011/12.

3

RESEARCH

At the heart of UCD's research strategy is the ambition to address the challenges that will shape Ireland's future and the University's role in the wider world. UCD has embedded its four major interdisciplinary research themes, matching Ireland's needs and current global challenges.

UCD is a national leader in research funding, attracting quality investment that has helped the University to establish a reputation as a destination of choice for leading researchers.

The University continues to forge exciting educational, research and commercial partnerships and collaborations with academic, community, business and professional organisations.

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Research Publications:

Details of all research publications for the period of the Report are available online at: www.ucd.ie/research/publications

Research Funding

Externally funded research contracts registered during the year amounted to €75.1 million (see table 1). Compared to 2010/11, this amount has fallen, due in part to the previous year's inclusion of €25.7 million in HEA awarded PRTL

projects. This period's figure of €75.1 million includes €14.1 million EU funding. The value of the contribution to overheads amounted to €9.5 million.

Table 1: Research Awards

Research Awards				
Year	Total value contracts signed incl. contributions to overheads (€ million)	Total contributions to overheads (€ million)	Total number of contracts awarded	Total number of proposals submitted
2005/2006	83.10	11.80	558	1,245
2006/2007	95.40	14.80	452	1,234
2007/2008	115.90	17.30	445	1,090
2008/2009	116.80	21.03	537	1,150
2009/2010	45.60	6.70	444	970
2010/2011	103.30	17.00	520	1,120
2011/2012	75.10	9.50	525	1,257

Funding Sources		
Funding source	Number of contracts	Value (€ million)
Science Foundation Ireland (SFI)	60	18.60
European Commission (EC)	40	14.10
Irish Research Councils (IRCSET & IRCHSS)	99	6.10
Enterprise Ireland (EI)	85	5.10
Others	241	31.20
Total	525	75.10

Internal Schemes in Support of Research

UCD Seed Funding Scheme

Just under €0.5 million was disbursed through the seed funding scheme, which covered 24% of the value of the applications received. One hundred and ninety individual awards were granted across four schemes: Dissemination and Outputs; Developing a

Vibrant Academic Community; Early Stage Innovation; and Horizon Scanning. The details of value and volume of applications and awards by College are shown in table 2.

Table 2: Seed Funding

Applicant College	Number of applications	Value of applications	Number of awards	Value of awards
Agriculture, Food Science and Vet Medicine	58	€282,630	29	€65,475
Arts & Celtic Studies	78	€226,056	32	€78,434
Business & Law	30	€103,952	16	€23,138
Engineering & Architecture	53	€189,129	24	€75,226
Health Sciences	57	€400,943	18	€67,718
Human Sciences	56	€298,196	25	€67,280
Science	110	€516,416	43	€109,477
Research Institutes	13	€36,233	3	€2,593
Grand Total	455	€2,053,555	190	€489,341

UCD Strategic and Major Initiative Scheme

The strategic and major initiative scheme provides support for the development of major interdisciplinary programmes that advance the strategy for research in UCD. During the year 19 strategic and major initiative awards were granted. See table 3.

Competitive Peer-Reviewed Extramural Awards

For the 2011 calendar year, Science Foundation Ireland (SFI) awarded 19% of research grants to UCD, by volume. UCD was also awarded in excess of €30.9 million in funding payments from SFI, which equated to 20% of SFI's total research funding (table 4 shows number of awards by institution).

Table 4: SFI 2011 Awards by Institution

Institution	No. of grants
University College Dublin	71
Trinity College Dublin	66
National University of Ireland, Galway	55
Dublin City University	41
University College Cork	36
National University of Ireland, Maynooth	22
University of Limerick	19
Royal College of Surgeons in Ireland	16
Tyndall National Institute	15
Dublin Institute of Technology	9
Waterford Institute of Technology	7
Cork Institute of Technology	5
Health Research Board	5
Teagasc	5
Other	10
Total	382

Table 3: Strategic and Major Initiative Awards

Project owner	Project title	Value of award €
Professors Nolan, Conrick & Ó hÓgartaigh	Strategic Advancement of Research UCD HSS	105,000
Dr Diane Payne	Exploring Social Media for Improved Learning, Healthcare Management and Intervention in Patient Groups in Ireland	97,994
Dr John Howard	Beyond Publications Infrastructure	80,000
Professor Walter Kolch	ITFoM (IT Future of Medicine) Project Preparation	75,000
Professor Barry Smyth	INSIGHT - Strategic Major Initiative Fund	65,000
Professor Eoin Casey	Strategic Initiative	50,000
Professor Gerardine Meaney	New Directions in the Humanities: Strategic Development of Research Capacity	50,000
Dr Michael O'Neill	ICT Strategy	50,000
Professor Patrick Lonergan	F & H Strategy	50,000
Dr Brian Caulfield	Development of a UCD Connected Health Strategy	50,000
Professor Gerardine Meaney	Encyclopaedia of Music in Ireland (EMIR)	20,000
Professor Mark O'Malley	Refurbishment of Space for SEES Cluster	17,000
Professor Gerardine Meaney	Global Irish Studies Network	16,526
Professor Geraldine Butler	Recruitment for Computational Infection Biology	12,000
Professor David Brayden	CBB SFI Centre Bid - External Consulting	10,000
Professor Robert Gerwarth	Collaboration on Cultural Encounter	10,000
Professor Thomas Brazil	SFI Centres Pre-Proposal "Metro-Nova"	5,000
Dr Susi Geiger	Multi-partner Research Centres: Impact and Business Models	4,611
Professor Donal MacElroy	Smart Surfaces Conference	2,706

Key Research Metrics and Performance Indicators

Peer Reviewed Publications

The number of peer-reviewed publications from UCD in *Web of Science*, during 2011, was 2,054, which is an average of 2.2 publications per academic staff member (staff members include permanent, permanent part-time and those with temporary contracts of greater than three years). UCD has consistently produced the highest volume of academic publications in the country since 2008 (see table 5).

Number of Publications in Top Ranking Outlets

The number of UCD publications in some of the highest impact peer-reviewed journals increased three-fold between 2004 and 2011. The impact of UCD's publications is now 38% above the world average (source Thomson Reuters InCites).

Percentage of Research-Active Staff

In 2011, 63% of UCD academic staff were research active. Active research staff are those who hold a permanent contract of employment or a temporary contract of three years or more in duration and have two of the following criteria: an active grant, supervising a PhD student (in the current academic year), and have been published in the last two years.

[Note: the definition of 'research active' has been revised for this academic year.]

Table 5: Number of publications by year

Publication Years	No. of Publications	No. of Books
2007	1,355	114
2008	1,617	66
2009	1,782	73
2010	1,993	81
2011	2,054	62

Infrastructure Development

Science Centre - Phase One

The new UCD Science Centre is an iconic 67,000m² building which will be home to Ireland's largest science community. The facility is being delivered over three distinct phases, consisting of an ambitious new build and refurbishment of existing estates.

An Taoiseach Enda Kenny TD, opened phase one of the UCD Science Centre (the UCD Centre for Molecular Innovation and Drug Discovery) in September 2011. Funded through the Programme for Research in Third Level Institution cycle 4 (PRTL14), it provides

6,300m² of scientific research space for 300 researchers working in pharmaceutical sciences, food and health, and nanomedicine. The building reached its full occupancy in 2012.

Phase two will provide a further 32,000m² of new and refurbished scientific facilities for 2,500 undergraduate and postgraduate science students, and 2,000 scientists. This phase will be completed in 2013.

Phase three will be defined during 2012.

Major Research Themes: Earth Sciences, Energy and the Environment

UCD has developed a major capacity in research on energy and the environment, drawing on strong disciplines in agri-food, biology, chemistry, engineering, geology and physics. This major research theme is built on UCD's capability to find solutions to key energy and environmental challenges in collaboration with national agencies and industry partners. Under this theme, major focus areas for research included climate change, renewable energy, biosystems, urban systems and energy innovation. Some of the major programmes and key achievements during 2011/12 are outlined below.

UCD Earth Institute

www.ucd.ie/earth

UCD Earth Institute, under the directorship of Professor Chris Bean, seeks to find solutions to key challenges in sustainable energy, climate change, natural hazards and nature conservation, in line with the University's major strategic research area of Earth Sciences, Energy and the Environment.

- The Institute-led PRTL15 PhD Programme in Earth and Natural Sciences, the largest structured doctoral programme in Ireland (€9.6 million), has now recruited its full complement of 56 high calibre national and international students.
- The Institute has sponsored ten research, policy and outreach events, including a joint Institute and National Economic and Social Council (NESC) session on Climate Change and Carbon Trading, opened by the Minister for the Environment, Community and Local Government, Phil Hogan TD.
- The design of the Institute's laboratory and write-up spaces within UCD Science Centre East was finalised and over €1.2 million has been dedicated to new technology platforms.
- Three Institute members have been awarded prestigious European Research Council grants.

Electricity Research Centre (ERC)

www.erc.ucd.ie

The Electricity Research Centre, under the directorship of Professor Mark O'Malley, is in collaboration with the main industries in the sector and focused on tackling the fundamental and applied research questions underpinning the development of a sustainable electrical energy system. The ERC comprises 14 industry members (as of August 2012) and is run by an industry board. There are four research strands within the ERC: Systems Planning, Operations and Control, and Networks are all part of the UCD School of Electrical, Electronic and Communications Engineering. The fourth strand, Energy Economics, is led by TCD.

- In May 2012, the ERC and Sustainable Electrical Energy Systems (SEES) Cluster held a Research Symposium in UCD entitled *Shaping the Grid*, which attracted 140 attendees including 90 from industry.

- ERC activity is funded by SFI programmes together with other major funding sources, including industry membership, PRTL15 under the ERCGI programme, the European Commission, IRCSET and Teagasc.

UCD Solar Energy Conversion (SEC)

www.seccluster.ie

UCD Solar Energy Conversion Strategic Research Cluster, under the directorship of Professor Don MacElroy, develops novel materials and devices that harness solar energy for solar-derived power and fuels, based on principles that mimic the steps in natural photosynthesis.

- The Cluster hosted the hugely successful four day international conference SmartSurfaces2012, which included plenary talks from Professor Dan Nocera, Harvard (*Time* Top 100 most influential people) and Professor Michael Graetzel, EPFL (one of the top 10 cited chemists worldwide); and a national public forum on the future of science, engineering and innovation in Ireland.
- In 2011/12, Cluster outputs included two patent filings, a technology licence, and top ranked publications in leading journals JACS, ACS Nano and a top three 2011 hotlist publication in catalysis (*ChemSusChem*).
- The Cluster leveraged funding in excess of €2.5 million in 2011/12 from Exchequer and non-Exchequer sources, including programmes from EU FP7, ERC, SFI, Enterprise Ireland and IRCSET.

UCD Reproductive Biology Research Cluster (RBRC)

www.ucd.ie/reproduction

UCD Reproductive Biology Research Cluster, under the directorship of Professor Alexander Evans, is a research partnership between UCD and Teagasc, investigating solutions to reproductive problems in cattle.

- The cluster published 28 peer reviewed publications, four reviews and 45 conference proceedings in 2011/12. Further publications are being held pending completion of additional studies necessary for a strong patent application.
- Professor Pat Lonergan, Professor Alex Evans and Dr Trudee Fair were successful co-applicants of a new EU COST Action, (FA1201, Epigenetics and Periconception Environment) worth €1 million.
- Professor Pat Lonergan received €600K funding as part of EU FECUND grant (total funding €3.2 million) in April 2012.
- The cluster hosted the 16th Conference of the European Society for Domestic Animal Reproduction and EU AI-Vets Conference at UCD.

Major Research Themes: Global Ireland

The aim of the Global Ireland research theme is to transform the study of Ireland and the Irish diaspora. Drawing upon Ireland's diverse and long-established capacity in the humanities and social sciences, UCD's Global Ireland theme aims to build major research programmes across a broad spectrum of inquiry, ranging from archaeology to behavioural social sciences. Global Ireland's programmes and key achievements during 2011/12 are outlined below.

UCD Geary Institute www.ucd.ie/geary

The UCD Geary Institute continues to build a reputation in Ireland and Europe as a centre of excellence in behavioural and applied micro economics, quantitative social sciences, public health and social network analysis.

- The Institute is the most cited institute of economics research in Ireland, as measured by the Social Science Research Network, and is the only Irish research institute ranked in the global top 5% of research institutes.
- Nobel Laureate in Economics, Professor James Heckman, leads an advanced European Research Council (ERC) programme which combines health, psychological and economic research, to examine the origins and the evolution of health inequalities over lifetimes and across generations.
- The Dynamics lab, a new initiative based at Geary and with research facilities at the UCD Complex and Adaptive Systems Lab (CASL), focuses on dynamic and complex behaviour in social networks and group processes. Dr Diane Payne leads the programme and is also the lead PI in the new PhD programme on simulation in the social sciences.

UCD Humanities Institute of Ireland (HII) www.ucd.ie/hii

The UCD Humanities Institute, under the directorship of Professor Gerardine Meaney, is a dynamic flagship platform for cutting edge research in the humanities. Its current strategic focus is to combine the traditional strengths of the humanities with the development

of collaborative, interdisciplinary research projects and skills under the overarching theme of Culture, Society and Change.

Highlights include:

- The conference of the International Shaw Society, *G.B. Shaw: Back in Town*, opened by President Michael D Higgins.
- The *Beckett and the State of Ireland* conference and UNESCO supported exhibition.
- A distinguished guest lecture by Professor Lorenz Welker, Professor of Musicology, Ludwig Maximilian University, Munich, on Music and Religion.

UCD Press, a component of the HII, published 10 titles during the period including:

- *Something to Chew On: Challenging Controversies in Food and Health* by UCD Professor Mike Gibney.
- *An Irish Century: Studies 1912-2012* was published to mark the centenary of the journal *Studies*, edited by Bryan Fanning.

UCD John Hume Institute for Global Irish Studies www.ucd.ie/johnhume

The UCD John Hume Institute for Global Irish Studies, under the directorship of Professor Gerardine Meaney, is a thematic programme established under PRTL14 which aims to transform the study of Ireland and its diaspora through a programme of interdisciplinary research, community outreach and international collaboration.

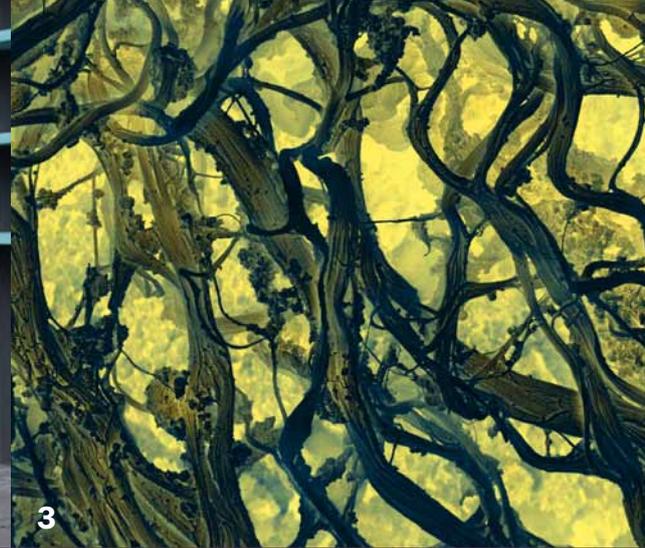
- *Over the Irish Sea: A Symposium of the Atlantic Archipelagos Research Project* was run in collaboration with the Moore Institute, NUI Galway, with keynote addresses by Professor Margaret Cohen (Stanford University) and Professor Claire Connolly (University of Cardiff).
- The UCD/Abbey Theatre Shakespeare Lectures featured Professor Frank McGuinness (UCD), Professor Kiernan Ryan (Royal Holloway, University of London) and Professor Mark Thornton Burnett (Queen's University Belfast).



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1. Dr Mark Pickering (r), pictured with UCD President, Dr Hugh Brady, was awarded the 2011 UCD Conway Festival of Research and Innovation gold medal for his research to identify an agent with potential therapeutic use in myelination disorders, such as multiple sclerosis. Dr Pickering is a postdoctoral researcher in the Neurotherapeutics Research Group, led by UCD Conway Fellow, Dr Keith Murphy

2. Pictured with Professor Des Fitzgerald, Vice-President for Research, are the winners of the 2011 UCD Images of Research Competition: Dr Ian Reid (bottom), UCD School of Chemical and Bioprocess Engineering, overall winner; Dr Sebastien Peuchmaille (r), UCD School of Biology and Environmental Science, 2nd place; and Dr Miguel Nicolau (top), UCD School of Computer Science and Informatics, and UCD CASL, 3rd place

3. Winner of the Images of Research competition was *Makes You Think*, by Dr Ian Reid, UCD School of Chemical and Bioprocess Engineering. This Scanning Electron Microscopy image is a piece of brain after removing cylindrical samples from the white matter in sagittal, coronal and transverse planes. The research project involves modelling and simulation of traumatic brain injury due to blunt head impacts. The image was taken in the Nano Imaging and Material Analysis Centre (NIMAC), based in UCD

4. The UCD Imagine Science Film Festival, July 2012, brought science to the public through film and digital media. Run during Dublin City of Science 2012, the Festival drew an audience of 5,000 people to multiple locations around Dublin

5. The short film, *Invisible*, directed by Evin O'Neill, IADT, with scientific input from Dr Emmanuel Reynaud, UCD School of Biology and Environmental Science, was the overall winner of the inaugural Science Imagine Expression Competition, which was part of the UCD Imagine Science Film Festival. The competition, led by UCD Research and The National Film School, IADT, and supported by Science Foundation Ireland, was aimed at linking scientists and student filmmakers to create new Irish science films

6. Pictured (l-r), September 2011, are: Mr John Travers, Former Director General, Science Foundation Ireland; Professor Jennifer McElwain, UCD; Máire Geoghegan-Quinn, EU Commissioner for Research, Innovation and Science; and Professor Eoin Casey, UCD. Professors McElwain and Casey were European Research Council 'Starting Grant' recipients and were among a group of six successful Irish-based researchers to secure funding under this prestigious funding programme

7. Pictured (l-r) are Dr Brian Caulfield, Director, TRIL Centre, and a Principal Investigator at the CLARITY Centre for Sensor Web Technologies, with Matt Patterson, a postgraduate researcher at CLARITY. Dr Caulfield is leading the testing of novel neuromuscular electrical muscle stimulation exercise technology on a parabolic flight campaign over Bordeaux, France



7

Major Research Themes: Health and Healthcare Delivery

Under the major research theme of Health and Healthcare Delivery, UCD explores the fundamental understanding of disease mechanisms and translates these findings for societal and economic benefit. UCD focuses on major challenges that are impacting health, nationally and internationally, such as diabetes, infection, skin disease and reproductive biology. UCD is providing solutions that enable healthy and independent living. In addition to an integrated and cross-disciplinary structure that encourages collaboration, UCD has created strong translational research links through its affiliated teaching hospitals and Molecular Medicine Ireland. Key programmes and achievements of 2011/12 are outlined below.

UCD Conway Institute of Biomolecular and Biomedical Research

www.ucd.ie/conway

UCD Conway Institute, which opened 10 years ago, is led by Professor Walter Kolch. It is a community of researchers performing novel research in biomedicine and translating results into clinical, industrial and commercial applications for the benefit of society.

- This year, 10% of publications were in journals with an impact factor greater than 8.0 (JCR 2011), including *Chemical Reviews* (Dawson); *Nature* (Cagney); *Nature Nanotechnology* (Dawson); *Nature Cell Biology* (Simpson); *Lancet Neurology* (Lynch); *Leukemia* (Kolch); and *Molecular Cell* (Kolch and Kholodenko).
- Success in sourcing and attracting significant external funds, as evidenced by recent awards under the EU FP7 programme include *FAST*, *NutriTech*, *Solving CKD*, *PRIMES* and *CRYPTOVACC* as well the first SFI-HRB-Wellcome Research Career Development Fellowship.
- There were 11 patent applications, nine invention disclosures, and four licence agreements in the period.

UCD Institute of Food and Health

www.ucd.ie/foodandhealth

The UCD Institute of Food and Health, under the directorship of Professor Mike Gibney, is a world-class centre for food and health research. It brings together academic and research staff from across UCD in health-related aspects of food research, and aligns research efforts with national, international and industry research agendas.

- In 2011/12 the Institute earned over €6 million in competitively awarded research funding and continued its success in the FP7 programme.
- The Institute continued with its series of policy seminars hosting one on the topical subject of fat and sugar tax in June 2012. Held in conjunction with the UCD Geary Institute, the seminar: *Fat and sugar taxes: Will they solve the problem?* attracted a wide audience from industry, academia, non-government bodies and public health.
- The Institute was involved in an extensive industry engagement exercise during 2011/12, from which significant levels of interest and follow-on dialogue arose, including a major potential partnership with a large multinational food and drink company. Currently, in excess of 25% of the Institute's income is generated through industry-led projects.

Systems Biology Ireland (SBI)

www.ucd.ie/sbi

Systems Biology Ireland, under the directorship of Professor Walter Kolch, designs new therapeutic approaches to cancer, degenerative and inflammatory diseases based on a systems level, mechanistic understanding of cellular signal transduction networks.

- Professor Kolch is currently coordinating two EU-FP7 Health programmes namely ASSET (€12 million - value to UCD of €1.7 million) and PRIMES (€15 million - value to UCD of €2.2 million) in addition to partnering on an EU-FP7 Coordinating Action Systems Medicine programme (CASyM) and an EU-FP7 Infrastructure for Systems Biology - Europe (ISBE) programme, the agreements for which are being negotiated.
- SBI researchers were also successful in acquiring individual awards such as the SFI Principal Investigator Awards, Walton Visitor Award, SFI SIRG grant, DFG Fellowship, PRTLI and IRCSET student fellowships.
- SBI has produced 149 peer review publications since being established in 2009 (29 of which were in the first half of 2012). These include papers in top tier journals on *Molecular Cell*, *Science Signalling*, *Cancer Research* and *Stem Cells*.
- SBI is reaching a wide audience beyond academia and industry, through various education and outreach initiatives, including the RTE series *Science Squad* and *Elev8*, as well as the Thesis in 3 (Tin3) event, which was held in November as part of Innovation Dublin.

Irish Drug Delivery Network (IDDN)

www.ucd.ie/iddn

The Irish Drug Delivery Network, under the directorship of Professor David Brayden, combines the three schools of pharmacy in Ireland, as well as UCD, Genzyme Ireland, Sigmoid Pharma, Arch Therapeutics and Aerogen PLC to provide a centre of excellence for research in drug delivery. IDDN is a focal point for drug delivery research in Ireland and a contact point for academia and industry. IDDN has had six papers published and three postdoctorate researchers move into new positions in academia and industry.

Centre for BioNano Interactions (CBNI)

www.ucd.ie/cbni

The Centre for BioNano Interactions, under the directorship of Professor Kenneth Dawson, is Ireland's national platform for bionano interactions science applied to the fields of nanosafety, nanobiology and nanomedicine. Nanoscience has the potential to revolutionise and benefit many aspects of human society, especially in the fields of information technology and medicine, if harnessed responsibly.

- The CBNI-coordinated EU-FP7 project, *Research Infrastructure for NanoSafety Assessment (QNano)*, had a successful first year, with its inaugural annual conference held in Dublin in February 2012. The first round of Transnational Funding supported 21 of the 40 applications from researchers to access state-of-the-art characterisation facilities in 12 of the partner laboratories.
- A publication from CBNI in *Nature Nanotechnology* demonstrated the effect of the cell cycle on nanoparticle uptake and dose in cells.
- CBNI researchers continued to be recognised for excellence, with Professor Kenneth Dawson being appointed as an Australian Regulatory Fellow in 2012.

UCD Nanomedicine Centre (NMC)

www.ucd.ie/nanomedicine

In November 2011, the UCD Nanomedicine Centre began to combine the expertise of 16 Principal Investigators to build high-risk, high pay-off multidisciplinary programmes in: developing new diagnostic techniques; understanding nanosafety and the regulatory and ethical risks and considerations of nanoparticles and nanomaterials; and improving drug delivery methods and efficacy.

Key outcomes in 2011/2012 include:

- Submitting 91 bids of which 38 were funded for an added value of over €8.1 million.
- Developing unique UCD facilities in nanoscale technologies including simulation and modelling, *in vitro* and *in vivo* imaging, and biosensing.

- An industry engagement programme and commercialisation platform.
- UCD membership to the European Technology Platform in Nanomedicine (ETPN).

Technology Research for Independent Living (TRIL)

www.trilcentre.org

The Technology Research for Independent Living Centre, under the directorship of Dr Brian Caulfield, is an international research centre at the forefront of using mobile devices with novel sensor technology and algorithms. This pursues new, innovative care pathways to promote independent living in the ageing population and facilitate remote management of chronic disease. The Centre is an academic, industry collaboration between UCD, TCD and multiple industry partners, including Intel and GE-Healthcare.

- The TRIL-Janssen Innovation Partnership has received funding of €220K from Enterprise Ireland to explore potential technology solutions to improve the monitoring and management of patients with Alzheimer's disease, in the home setting, while providing additional support to their caregivers. This is related to existing work carried out in collaboration with Pfizer.
- The Minister for Research and Innovation, Sean Sherlock TD, launched the TRIL Clinic's novel suite of technologies, which has the potential to increase accuracy in the assessment of falls risk in older people.
- TRIL initiated a collaboration with An Garda Síochána to develop a communications platform for enhanced security among older adults living in rural settings. This work is supported by the Motorola Solutions Foundation.

UCD Clinical Research Centre (CRC)

www.ucd.ie/crc

The UCD Clinical Research Centre, under the directorship of Dr Peter Doran, is a national leader in clinical and translational research. It strives to discover ways of improving medical care and to establish new treatments which will improve the quality of life for those with both acute and chronic disease.

- Over 240 projects have been completed or are ongoing, involving over 280 CRC users.
- CRC is a major partner in the Wellcome Trust and the Dublin Centre for Clinical Research, funded by the Health Research Board.
- CRC was audited and approved by the Irish Medicines Board.
- CRC is a partner in the HRB/Wellcome Trust Dublin Centre for Clinical Research Network.

Molecular Medicine Ireland (MMI)

www.molecularmedicineireland.ie

Molecular Medicine Ireland, under the directorship of Dr Ruth Barrington, is a partnership between UCD, NUIG, RCSI, TCD and UCC. Its mission is to accelerate the translation of biomedical research into improved diagnostics and therapies for patients.

- The MMI Clinical and Translational Research Scholars Programme was launched in October 2011, by the Minister for Research and Innovation, Sean Sherlock TD. This four year structured PhD programme was developed with PRTL15 funding by MMI, UCD, NUIG, TCD and UCC, with input from industry and the Irish Medicines Board.
- 14 clinical research studies are currently underway across the Dublin Centre for Clinical Research (DCCR) Network, involving the recruitment of 3,567 patients in disease areas such as respiratory, neuropsychiatry and prostate cancer.
- MMI was awarded funding by the Irish Cancer Society to host the role of research coordinator for the National Prostate Cancer Research Group.
- The Irish Clinical Research Infrastructure Network (ICRIN) launched a clinical research web portal: a single online resource containing tools and information on clinical research in Ireland.

National Institute of Bioprocessing Research and Training (NIBRT)

www.nibrt.ie

The National Institute for Bioprocessing Research and Training, under the interim directorship of Professor Ian Marison, is a world-class institute that provides training and research solutions for the bioprocessing industry in state-of-the-art facilities located in the Belfield Innovation Park. NIBRT is based on an innovative collaboration between UCD, TCD, DCU and Institute of Technology

Sligo, and is part-funded by IDA Ireland. Its aim is to support the development of the existing bioprocessing industry in Ireland and to attract additional bioprocessing companies to Ireland.

- In January 2012, NIBRT won the Special Recognition Award in the International 2012 Facility of the Year Awards (FOYA) programme. This is the pharmaceutical industry's premier awards programme dedicated to celebrating innovation and accomplishments in facility design, construction and operation.
- In March 2012, NIBRT was awarded the prestigious Centre of Innovation Award from the Waters Corporation.
- In August 2012, NIBRT was announced as a finalist in Bioprocess International: Collaboration of the Decade Awards.

Applied Research Centre (ARC)

The UCD RTI Applied Research Centre is a Centre of Excellence resulting from the collaborative efforts of UCD and US-based RTI International. The combined strengths of UCD and RTI established ARC in February 2012. The Centre delivers advanced technical capacity in the design and execution of large and complex studies, and leading-edge survey, statistical, evaluation, and other applied research methods developed at RTI. These complement the high-quality academic research conducted at UCD.

- ARC hosted a two day International eHealth seminar in UCD in May 2012. Leading innovators from UCD, RTI and NUIG presented cutting edge research at the conference. It was well attended by research scientists, industry partners and international collaborators. It was held in support of *Research Prioritisation Report Area D: Connected Health*, published by the Department of Jobs, Enterprise and Employment.
- ARC established a national, European and transatlantic multidisciplinary network of basic and applied researchers, industry partners, policy makers and collaborators based around its UCD centre.

Major Research Themes: Information, Computation and Communication

The field of Information, Computation and Communication has been identified as being of major strategic importance to Ireland's ambition of creating a knowledge economy. UCD's strengths in broad research areas such as life sciences, economics, social sciences, climate and environmental modelling all require analysis of large-scale data sets, a deep understanding of systems and simulation through complex modelling. Within UCD, this major research theme builds on the unique collaborative programmes outlined below.

CLARITY - Centre for Web Sensor Technologies

www.clarity-centre.org

CLARITY, under the directorship of Professor Barry Smyth, is a partnership between UCD, DCU and Tyndall National Institute Cork. The Centre focuses on the intersection between adaptive sensing and information discovery, in order to develop innovative new technologies and contribute to improving quality of life, in areas such as personal health, digital media and management of the environment.

- CLARITY's funding base is €33.3 million. In addition to €12 million from SFI, CLARITY has secured more than €13 million from EU and industry sources, and now supports over 130 researchers.
- CLARITY's scientific output has surpassed 190 journal papers and 460 conference papers. An SFI review conducted by an international panel adjudged CLARITY to be a World Class Centre, and stated: "SFI is justified in continuing its funding and considering a follow-on award".
- To date, CLARITY's research, supported by Enterprise Ireland, has led to 12 patent awards, 13 licence agreements and three spin-out companies. CLARITY is collaborating with over 60 companies.

UCD Complex and Adaptive Systems Laboratory (CASL)

www.ucd.ie/casl

UCD Complex and Adaptive Systems Laboratory, under the directorship of Professor David Coker, has created four clusters of research excellence. These build on the Institute's competitive strengths, leveraging interdisciplinary research to solve the 'grand challenges' in science and society. To this end, the application domains currently being pursued align with global societal needs and present real opportunities to build on excellence and amplify the CASL research impact.

Clique - Graph and Network Analysis Cluster

www.cliquecluster.org

The Clique research cluster, under the directorship of Professor Pádraig Cunningham, addresses the development of computational techniques for the analysis and visualisation of network data.

- Clique won the Enterprise Ireland Data Analytics Technology Centre Grant, valued at €921,349, in conjunction with DIT and UCC.
- Clique Principal Investigator, Conor Hayes, and Senior Postdoctoral Researcher, Derek Greene, continued to promote Clique's research at international events. They were local chairs for the International Conference for Weblogs and Social Media (ICWSM) which was held in Dublin in May 2012. Clique also chaired a Workshop on Social Media Visualisation (SocMedVis) at the conference.
- Clique's research activities were widely featured across national and international media channels, including RTE1's *The Science Squad*, *Wired* (UK), *Time Opinion*, *The Guardian* (UK), CBS, MSNBC and *The Irish Times*.

FMC² - Financial Mathematics and Computation Cluster

www.fmc-cluster.org

FMC², under the directorship of Professor John Cotter, is a collaboration between UCD, DCU, NUI Maynooth and industry partners. It brings together complementary expertise in financial mathematics, financial economics and computer science to create a holistic research programme in asset and risk management.

- Professor John Cotter took over from Professor Anthony Brabazon as Director of FMC² in June 2012.
- In May 2012, FMC² underwent a mid-term review and was successful in gaining funding from SFI to expand its research activities over the next two and a half years.
- FMC² organised a three day summer school on Dynamic Capital Structure Models, in May 2012, which was delivered by Semyon Malamud (EPFL, Switzerland).
- The cluster published articles in two top international financial journals, *Econometrica* and the *Journal of Financial Economics*, and continues to increase its levels of publications and outreach activities.

National Digital Research Centre (NDRC)

www.ndrc.ie

The National Digital Research Centre, under the directorship of Ben Hurley, is an independent enterprise dedicated to accelerating research from idea to income. Founded by a consortium of third level institutions (UCD, DCU, IADT Dun Laoghaire and NCAD) NDRC's collaborative approach with technology and business innovators drives greater collective success while cultivating bolder attitudes towards invention and investment.

- For 2011/12, 70 budding businesses have emerged from NDRC's portfolio, with ventures creating 221 new jobs.
- 55% of NDRC portfolio companies secured commercial investment, valued at €9.6 million.
- NDRC graduate LogEntries raised \$1.1 million in a funding round led by Polaris Ventures.
- NDRC spin-out SilverCloud Health was voted Most Investable Start-Up in Ireland, by the IVCA/ISA.
- NDRC graduate Redeem&Get was voted Spark of Genius, at the Dublin Web Summit.
- NDRC partnered with *The Irish Times* to deliver a mini-accelerator for start-ups and with EirGrid to create the SmartGrid Innovation Hub.

UCD's Major Research Programmes, Centres and Institutes

UCD Major and Multidisciplinary Research Institutes

UCD Conway Institute	www.ucd.ie/conway
UCD Geary Institute	www.ucd.ie/geary
UCD Complex and Adaptive Systems Laboratory	www.ucd.ie/casl
UCD Institute of Food and Health	www.ucd.ie/foodandhealth
UCD Humanities Institute of Ireland	www.ucd.ie/hii
Centre for Synthesis and Chemical Biology	www.ucd.ie/cscb
UCD Earth Institute	www.ucd.ie/earth

SFI Centres for Science, Engineering and Technology (CSETs)

CLARITY - Centre for Sensor Web Technologies	www.clarity-centre.org
Systems Biology Ireland	www.ucd.ie/sbi

UCD-led SFI Strategic Research Clusters (SRCs)

Centre for BioNano Interactions	www.ucd.ie/cbni
Irish Drug Delivery Network	www.ucd.ie/iddn
UCD Reproductive Biology	www.ucd.ie/reproduction
UCD Solar Energy Conversion	www.seccluster.ie
Financial Mathematics Computation (FMC ²)	www.fmc-cluster.org
Clique	www.cliquecluster.org

Major Inter-Institutional Collaborative Programmes

Molecular Medicine Ireland (MMI)	www.molecularmedicineireland.ie
National Institute for Bioprocessing Research and Training (NIBRT)	www.nibrt.ie
Technology Research for Independent Living (TRIL)	www.trilcentre.org
National Digital Research Centre (NDRC)	www.ndrc.ie

UCD Research Centres

UCD Bioresources Research Centre	www.ucd.ie/bioresources
Electricity Research Centre	www.erc.ucd.ie
UCD Nanomedicine Centre	www.ucd.ie/nanomedicine
UCD Clinical Research Centre (CRC)	www.ucd.ie/crc
Dublin Academic Medical Centre (DAMC)	www.ucd.ie/medicine/lifewithus/ourcampus/dublinacademicmedicalcentre
National Virus Reference Laboratory	www.ucd.ie/nvrl

UCD Thematic Institutes and Archives

The Charles Institute	www.ucd.ie/medicine/ourresearch/researchcentres/ucdcharlesinstituteofdermatology
Claude Shannon Institute	www.shannoninstitute.ie
UCD Institute for Sport and Health	www.ucd.ie/instituteforsportandhealth
UCD John Hume Institute for Global Irish Studies	www.ucd.ie/johnhume
UCD Micheál Ó'Cléirigh Institute	www.ucd.ie/mocleirigh
UCD Clinton Institute for American Studies	www.ucd.ie/clinton
UCD Institute for British Irish Studies	www.ucd.ie/ibis
Irish Institute for Chinese Studies (UCD Confucius Institute)	www.ucd.ie/china
UCD Digital Library (formerly IVRLA)	www.digital.ucd.ie
Irish Social Science Data Archive (ISSDA)	www.ucd.ie/issda



4

INNOVATION AND PARTNERSHIP

Innovation is the third pillar of UCD's core mission, alongside education and research. At UCD, innovation is a broad concept which covers not only technological innovation but also areas such as policy, social and cultural innovation.

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Fostering Innovation Among UCD Staff	42

Maximising Impact of UCD's Knowledge and Expertise

On 1 September 2011, Professor Peter Clinch was appointed UCD Vice-President for Innovation, and now leads the Office of the Vice-President for Innovation.

The Office's mission is to enhance the value and quality of UCD's innovation activities to achieve the maximum impact for the University, its partners, and for social and economic life in Ireland and in the wider world.

To advance this mission UCD Innovation supports system-wide innovation activities across the University, through four key innovation themes:

Inspiring Creative Graduates

Through leading-edge programmes, UCD ensures that graduates are highly skilled, innovative and entrepreneurial, and can compete effectively for international employment. Through life-long learning, continuing professional development and executive education, the University contributes to maintaining and enhancing the skills and talents of the population, which is the lifeblood of the economy and of society.

Putting Knowledge to Work

The world's greatest problems require multidisciplinary, integrated solutions. UCD is Ireland's most international university and much of the research focuses on addressing global challenges. At the same time, UCD researchers, students and graduates contribute to economic, social and cultural development on a broad scale.

Partnering with Industry

UCD has an international reputation for being at the forefront of innovative research and creative discovery. The University is committed to increasing levels of collaboration and partnership with international industry, something that is being achieved through collaborative research, onsite co-location with UCD's world-class research base, and technology licensing to a diverse range of sectors. UCD also works with governments and public organisations in policy innovation and transfer, as well as engaging with the voluntary sector through social and cultural innovation partnerships.

Growing and Supporting New Business

At NovaUCD, the hub for new ventures and entrepreneurs at UCD, the University provides purpose-built, state-of-the-art incubation facilities for knowledge-intensive companies, alongside a comprehensive business support programme for our client companies.

During the year a new UCD Innovation website (www.ucd.ie/innovation) was launched to give expression to innovation as the third pillar of University activity.

Innovation highlights included:

- Over 8,700 students, educated in a research, innovative and entrepreneurial environment, graduated from UCD.
- UCD signed a contract to establish the Beijing-Dublin International College in partnership with the Beijing University of Technology. The new college will focus on four areas relevant to successful enterprise development in China and Ireland, including innovation and entrepreneurship.
- UCD and Elan Corporation plc announced two scholarships and an annual lecture series at UCD, entitled: Business of Biotechnology. This forms part of Elan's €3.17 million donation to build capacity at the interface between business and science disciplines. The donation will also establish a new Elan Chair in the Business of Biotechnology, to provide academic leadership in this strategically important area.
- ResMed Inc., a global leader in the development, manufacturing and marketing of medical products to combat sleep and respiratory disorders, is expanding its R&D and Innovation facility at UCD over the next three years.
- UCD continued its partnership with BT Ireland in the delivery of the 2012 BT Young Scientist Business Bootcamp at NovaUCD.
- Over 200 people are employed by companies based at NovaUCD, which have raised in excess of €40 million in equity investment. Eighty jobs were created in 2011, with 300 more expected.
- Forty eight new partnerships forged with industry.
- Forth two invention disclosures were reported.
- Thirty nine patent applications were filed across all areas of life sciences, engineering and information communication technology.
- Fourteen licence agreements were concluded with a range of indigenous and international companies.
- Fifteen new ventures completed the NovaUCD 2011 Campus Company Development Programme.
- HeyStaks, the UCD social web-search spin-out company, with offices in NovaUCD and San Francisco, was selected to represent Ireland at the European Vodafone Mobile Clicks 2011 final.
- LogEntries, a UCD spin-out company, which has developed a cloud-based, real-time search and analysis log-file management solution for enterprises, secured over \$1 million in funding, led by Polaris Venture Partners with support from Enterprise Ireland.
- Biosensia, a point of care diagnostics company headquartered at NovaUCD, secured €1.2 million in new funding, led by ACT Venture Capital.
- LogScreen, an IT security solutions company headquartered at NovaUCD, scooped the 2011 Most Promising Start-Up Award at the Dun Laoghaire-Rathdown County Enterprise Awards.



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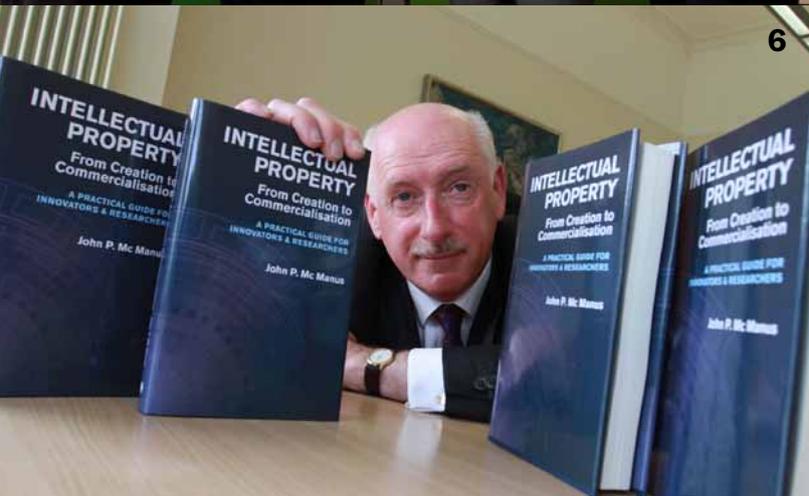
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1. Reflecting on Innovation. Pictured at NovaUCD is Professor Christopher Tucci, Chair in Corporate Strategy and Innovation, École Polytechnique Fédérale de Lausanne, Switzerland, prior to delivering the InterTradelreland 2012 Innovation Lecture at UCD, entitled *Managing Technological Change Through Innovation: What's an Incumbent to Do?*
2. Tethras Technology, headquartered at NovaUCD, and founded by (l-r) Brian Farrell and Brendan Clavin, provides end-to-end localisation services for mobile application developers, and was named the Best High Growth Company, in the Dublin regional final of the InterTradelreland 2011 Seedcorn All-island Business Competition
3. Pictured (l-r) are Professor Brian Glennon and Dr Mark Barrett, co-founders of APC Ltd, a pharmaceutical research and technologies spin-out company from UCD's School of Chemical and Bioprocess Engineering. APC Ltd was the overall winner of the NovaUCD 2011 Campus Company Development Programme
4. Pictured (l-r) at the announcement of the expansion of Research, Development and Innovation (RD&I) facilities for ResMed Inc at UCD, with the creation of up to 50 new RD&I positions, are: Barry O'Leary, Chief Executive, IDA; Professor Peter Clinch, UCD Vice-President for Innovation; Dr Peter Farrell, founder, CEO and Chairman, ResMed Inc; John Perry TD, Minister of State, Department of Jobs, Enterprise and Innovation; and Dr Conor Hanley, MD, ResMed Ireland
5. Pictured (l-r) at the launch of the new Intellectual Property Protocol, *Putting Public Research to Work for Ireland*, in Nova UCD, are: Professor Peter Clinch, UCD Vice-President for Innovation; Sean Sherlock TD, Minister for Research and Innovation; Richard Bruton TD, Minister for Jobs, Enterprise and Innovation; and UCD President, Dr Hugh Brady
6. Pictured at NovaUCD is author Dr John P McManus, at the launch of his new book entitled *Intellectual Property: From Creation to Commercialisation*
7. Five secondary school students who work-shopped a project entitled Smart Pipe: *An Automated Water Circulation Anti-freezing System* won the best overall group at the 2012 BT Young Scientist Business Bootcamp, held at UCD. Pictured (l-r) are Matt Murtagh White (17) from Kilkenny College, Kilkenny; Emer Creedon (16) from Regina Mundi College, Cork; Adam Torrens (19) from South Eastern Regional College, Bangor; Deirdre Harford (17) from Loreto Secondary School, Balbriggan, Dublin; and Megan Doyle (16) from Skerries Community College, Dublin

Fostering Innovation and Entrepreneurship at Third and Fourth Levels

TCD-UCD Innovation Academy, an educational collaboration between University College Dublin and Trinity College Dublin, welcomed 200 students in 2011/12, including PhDs, taught master's, industry professionals, recent graduates and unemployed graduates via the HEA Springboard programme. This includes students from Queen's University, Belfast, the National College of Art and Design, and Lancaster University.

The *Innovation Academy* continued to work extensively with organisations outside the University, involving 40 multidisciplinary projects in 2011/12. This led to media coverage of some project outcomes including a BBC3 documentary on the Hireland initiative.

The *Innovation Academy's* Action-Based Entrepreneurship Education workshop, at the Euroscience Open Forum 2012, helped to improve its international profile. This included participation in an international discussion panel which raised interesting and diverse arguments regarding the evolving methods of entrepreneurship education for Science Engineering and Technology students.

The Director of the *Innovation Academy*, Professor Suzi Jarvis, along with colleagues from Northern Ireland participated in a US State Department funded visit to Boston and San Diego to explore ways to develop and sustain young business leaders.

Fostering Innovation Among UCD Staff

As part of the drive to create a culture of innovation and entrepreneurship, the Office of the Vice-President for Innovation participated in several programmes and initiatives across the University during the year, including the delivery of short talks and seminars. Topics included: overview of the commercialisation process; introduction to intellectual property; introduction to design thinking; and how innovation is relevant to postdoctoral researchers and patent searching.

UCD staff continued to commercialise their research successfully. For example, Dr Barbara Murphy, a researcher in the UCD School of Agriculture and Food Science, was presented with the Enterprise Ireland 2012 'One to Watch' Award, in recognition

of her work to develop her invention, a therapeutic light mask for horses, into a marketable product. Dr Murphy developed the mask in collaboration with Professor John Sheridan, UCD School of Electrical, Electronic and Communications Engineering.

Operating under a barter system, the *Innovation Exchange* was launched. The aim is to foster a sense of community and develop an innovation and entrepreneurial ecosystem throughout UCD. In 2012, a number of loan arrangements were made, including Lego from the Lego Innovation Studio being given to Education and Outreach Officers in CLARITY and SBI, and iPads being provided to UCD staff.



5

UCD STUDENT EXPERIENCE

UCD provides a number of services and supports to ensure that students become well-rounded individuals during their time at University. This is an essential part of their education and one that will serve them long after they graduate. UCD is committed to creating an environment where students will enjoy and benefit from a holistic experience that is as challenging, rewarding and stimulating as possible.

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Student Administrative and Support Services

In support of the University's academic programmes a new Policy on Fitness to Practise was introduced. This provides robust support to, and guidelines for, programmes, including periods of experiential learning and practical training, which require students to work in professional settings and places them in direct contact with the public.

An academic governance structure designed to manage and promote Continuing Professional Development (CPD) activity was also established. Following an extensive review, enhancements to the Policy on Recognition of Prior Learning were approved, thereby consolidating a number of existing policies relating to the accreditation of prior learning and programme transfer.

Continuing its commitment to provide excellent support services to students, UCD Registry added new documents to its Online Documents Self-publishing Initiative. The service gives students instant access to University documents, such as Certificates of Attendance, Transcripts, Statement of Results and Academic Statements, which can be verified online by third parties such as the Garda National Immigration Bureau.

In addition to using email and online content to communicate important information to students, UCD Registry's use of social networks, such as Twitter and Facebook, proved popular with students as a way of distributing administration-related information.

In April 2012, 160 staff took part in a symposium entitled: *The Life Cycle of the Student - How It All Links Together*. The event, organised by UCD Registry in collaboration with colleagues from across the University, gave delegates the opportunity to showcase new developments, highlight examples of good practice and explore issues around the provision of administration-related information to students.

Office of the Vice-President for Students

The Health Promotion Committee pursued a number of initiatives during 2011/12, including: a Healthy Eating Competition; Cancer Awareness; and Get in Gear programme. The Committee also produced a Healthy Eating Cookbook which was distributed to all new students.

Orientation 2011 saw over 4,500 new students enter the University in September, with students attending a range of induction activities as well as the President's Welcome in O'Reilly Hall.

The Student Experience Strategic Advisory Committee met throughout 2012 to discuss issues including Orientation, residences, new Student Centre and Student Welfare Fund.

UCD's Student Advisers, counselling services, health services and Chaplains continue to offer a wide range of vital supports to students on financial matters, medical health, mental health and other issues.

Student Advisers

2011/12 saw the UCD Peer Mentoring Programme further complemented by the introduction of the Peer Assisted Learning programme and BA Linkedup initiative. Peer mentoring, largely organised through the Student Advisers, offers current students the opportunity to share their experience of student life with incoming first year students.

The University actively promotes volunteering within the student community by supporting initiatives such as UCD Volunteers Overseas (UCDVO) and Student Societies. Support is also provided to the national third level mental health campaign *Please Talk*, founded in UCD, which celebrated its fifth anniversary.

Student Health and Counselling

UCD Student Health hosted a very successful Irish Student Health Association Conference in 2012. The service also maintained its extended opening hours, providing students with extra support during the year. UCD Counselling staff were involved in organising a meeting of colleagues in student counselling services from other third level institutions, to review procedures and practices for managing waiting lists and student issues.

Chaplains

The Chaplains' annual report: *Global Minds: New and Open Hearts*, highlighted the various events organised by the Chaplaincy as well as the outreach to international students in the establishment of the inter-faith forum among students. This year also saw the Chaplains involved in lectures, symposia and talks given to students, as well as organising the 10th anniversary walk of the Compostela, Spain.



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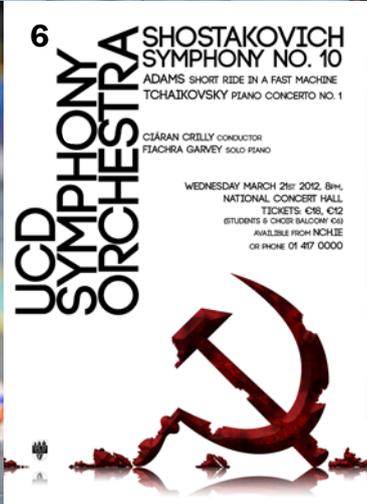
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1. UCD Choral Scholars performing at the 2011 UCD Foundation Day Dinner, conducted by Desmond Earley, their Artistic Director
2. UCD Senior Women's Rowing team claiming the Corcoran Cup, during the Annual Colours Race against Trinity on the River Liffey
3. UCD captain, Laura Wilson, and team-mates celebrate with the cup after winning the Electric Ireland Women's Irish Senior Cup Final against Loreto, at the National Hockey Stadium, Belfield
4. Barry Daly, UCD, in action against James Kearns, Old Belvedere, during the Fraser McMullen All-Ireland Under 21 Cup Final, at Lakelands Park, which UCD won
5. Ciara Everard, UCD Physiotherapy student, winning the National Indoor Athletics Championships, held in the Odyssey Arena, Belfast, in February 2012. The previous week she won the IUA Irish Intersarsity Championships, breaking Sonia O'Sullivan's 1991 indoor record in the Under 23 800 metres
6. Poster from UCD Symphony Orchestra performance of Shostakovich Symphony No. 10, in the National Concert Hall, March 2012
7. Pdraig Harrington was awarded the James Joyce Award from UCD Literary & Historical Society, for his outstanding sportsmanship and achievements which make him an inspirational figure in the lives of many young people. He is pictured with Christine Simpson, Auditor of the UCD L&H Society
8. Students await British actor Sir Christopher Lee, who received an honorary life membership of UCD's Law Society

Sports, Societies and Other Activities

UCD is committed to providing an environment where students are given every possible encouragement and support to achieve their potential, in both academic and personal spheres. UCD Sports Clubs and Societies provide that environment.

The opening of the new Student Centre provides a foundation from which the 'UCD Experience' can further develop. The 50 metre swimming pool and new sporting facilities will encourage students to develop healthy habits and to engage in physical activity. These new facilities will be critical to ensuring that UCD reaches the target outlined in the UCD Strategic Plan to 2014 *Forming Global Minds*, requiring 60% of students to be engaged with clubs and societies.

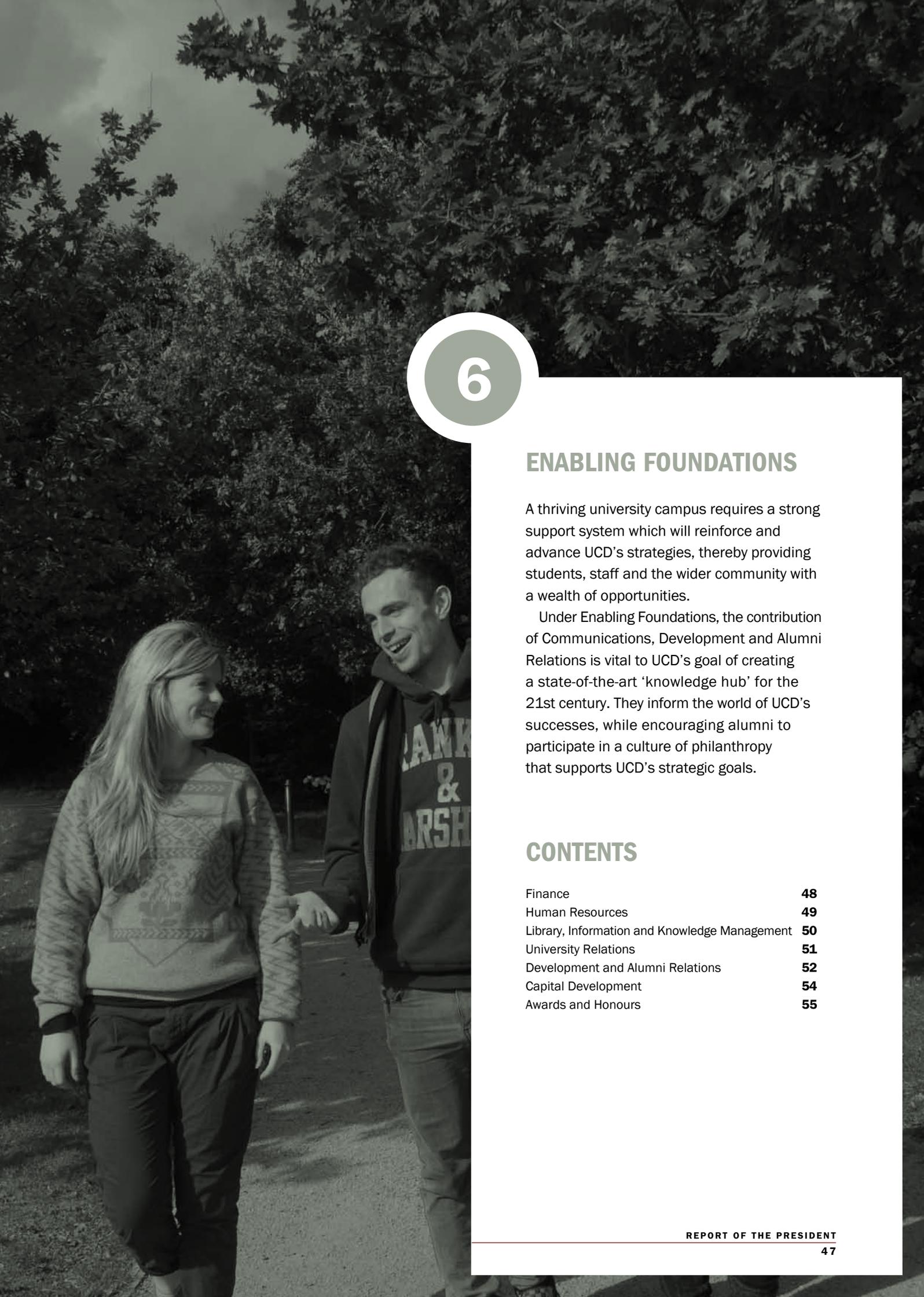
It has been an impressive year for University clubs and societies. Members were represented at county, national and international level, as well as at the Olympics in London, and the World Debating Finals.

UCD Sport

- Leinster Rugby training and administration moved to UCD in June 2012.
- UCD was represented in the London 2012 Olympics by two *Ad Astra Academy* Scholars: Annalise Murphy and Arthur Lanigan O'Keeffe.
- UCD hosted the Notre Dame and Navy American Football teams, including 12 high schools and division three Colleges, along with their bands and cheer squads, for a one day training session.
- UCD Sport, in association with the Irish Hockey Association, hosted the 2012 Men's Olympic Hockey qualifier.
- At U21 level the Rugby Club claimed all Cup and League titles. Seven UCD students were selected on the Ireland Under 20 squad for the Junior World Championship in South Africa in June.
- The Soccer Club won the Collingwood Cup.
- The Ladies' Hockey first team were Electric Ireland Irish Senior Cup Champions.
- The Men's Novice 4 won the University Rowing Championships.
- Men's and Ladies' boat clubs took three of the four titles at the Colours Races, claiming Gannon and Corcoran Cups and the Dan Quinn Shield.
- The Men's Premier League Volleyball team won the League title.
- The UCD Swim team won the overall title at the University Championships.
- Sports scholar Ciara Mageean was named Junior Athlete of the Year at the National Athletics Awards.
- Sports scholar Ciara Everard won the IUAA Irish Intervarsity Championships.
- The Men's Table Tennis team won the Intervarsity Championships.
- Over 85 UCD staff members took part in the UCD Get in Gear Be Active health and exercise programme. The aim of the programme is to help improve the health and well-being of employees through health education and exercise activities.

Societies

- The Irish Student Drama Association (ISDA) Festival was hosted by UCD, where the University retained its Best Overall Production award and received five awards in total.
- The Musical Society's production of *Cabaret*, performed in Astra Hall was a sell-out.
- The annual Dramsoc Leaving Certificate production continues to be a massive success, with this year's production of *Hamlet* selling out. It successfully showcased the best of UCD Society life to over 2,000 Leaving Certificate students from local schools.
- UCD L&H Society won the Irish Mace Championships, the International Mace Championships, the Trinity, Maynooth and DCU Intervarsity's, and the US Championships. They were runners up in the prestigious *Irish Times* Championships and the European Championships, and reached the semi-finals of the World Universities Debate Championships.
- UCD Dance Society, in their first full year, took the overall Best College title at the Dance Intervarsity's in NUIG.
- UCD Dance Society was also named as the Society of the Year 2012, while UCD Vet Society and UCD LGBT jointly took the Small Society of the Year title.



6

ENABLING FOUNDATIONS

A thriving university campus requires a strong support system which will reinforce and advance UCD's strategies, thereby providing students, staff and the wider community with a wealth of opportunities.

Under Enabling Foundations, the contribution of Communications, Development and Alumni Relations is vital to UCD's goal of creating a state-of-the-art 'knowledge hub' for the 21st century. They inform the world of UCD's successes, while encouraging alumni to participate in a culture of philanthropy that supports UCD's strategic goals.

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Finance

The University expects to generate a surplus of €3.3 million for the financial year ending 30 September 2012, on its HEA core funded activities. This will reduce its accumulated deficit to €3.2 million.

This is the fourth year in succession that the University has generated a surplus and it is on course to eliminate its accumulated deficit completely. The reduction in this accumulated deficit has been achieved despite the progressive decline in the level of State funding.

In response to successive State funding reductions and the requirements of the Employment Control Framework (ERC), the University's Budget Review Committee continued to play a crucial role in reviewing and monitoring expenditure levels across all units in the University.

Commercial income generation remained a valuable contributor to the University's finances. Income from ancillary activities also continued to increase during the year, and 2011/12 again saw a very significant growth in UCD's summer residential business, which was previously licensed out to an independent operator. The Commercial Office progressed its objective to improve the accommodation booking system in order to facilitate the additional summer business. This included longer office opening hours to cater for the international market. A number of contracts around the provision of catering services also contributed to financing the operations of the University.

In partnership with suppliers, significant savings in non-payroll expenditure were accomplished, through the wider use of tendering and price negotiations with suppliers. The UCD Procurement Office played an important role in awarding tenders and it acted as the lead partner in a number of major collaborative contracts with other universities.

New purchase invoicing processes with major suppliers were introduced to enable the electronic submission of invoices directly into UCD's financial systems. This will eliminate the need for the manual processing of invoices and will reduce the substantial paper flows. Electronic purchasing systems are also in full operation across the University with the use of supplier commodity codes.

The University is now consolidating its purchasing functions to enable units in the University to achieve benefits from more efficient procurement practices.

During 2011/12, the University secured loan funding of €90 million from the European Investment Bank, to provide part of the funding necessary to finance the University's capital expenditure programme over the next three years. This includes funding for the new Student Centre, and funding for student residences and a number of other smaller capital projects.

UCD has allocated €110 million for phase 2 of the UCD Science Centre development during the year, which includes State capital funding, philanthropy and a contribution from UCD.

The University faces major financial challenges in the year ahead and achieving further reductions in its accumulated deficit will prove extremely difficult. As State funding will decline further in 2012/13, achieving a budget surplus will depend largely on the University's ability to reduce operating costs, to attract more students and to generate additional funding from the student contribution and student tuition fees, particularly overseas fees income. In that regard, UCD continued to invest in its international student and taught masters activities, which are a valuable source of non-Exchequer income.

Human Resources

The University's Human Resources (HR) strategy for 2012-2015 was developed and finalised in 2011. It was based on an extensive consultation process with University management, staff and key users of the services provided by UCD HR. The strategy also incorporated the core recommendations emerging from the HR Quality Review of 2011. In tandem with feedback from all categories of staff, national and international HR practices were reviewed and the benchmarking of HR practice took place with a number of leading international universities and comparator organisations.

As a result, the University's HR strategy has identified the following five areas for strategic HR focus and measurement:

1. Helping the University Management Team (UMT) identify staff priorities and shape the sectoral HR agenda;
2. Supporting University change;
3. Managing for success and performance, promoting the benefits of working in UCD and recognising staff contribution;
4. Continuing service delivery improvement;
5. Furthering HR team culture and development.

The intention of the strategy is two-fold: to provide the University with the opportunity to set out its staff priorities clearly; and to put the University in a position where it can lead on HR sectoral developments and priorities. This in turn should allow UCD to formulate solutions to complex HR policy related issues.

A programme of work has begun in these five areas. This includes helping the UMT to identify staff priorities and shape the sector's HR agenda. The UMT HR group was established and is now working on prioritising key HR issues, such as the area of staff engagement and contribution.

In the area of 'supporting University change', the HR team continued to work closely with schools and units to facilitate a variety of change-related initiatives. In the context of national

policies, HR is heavily involved at both local and sectoral levels in change processes which derive from the implementation of the Public Sector Agreement (PSA) 2010-2014. The PSA contains a number of provisions which are designed to provide for greater flexibility throughout the public sector in order to enhance services within the context of reduced resources. UCD HR is working closely with local units throughout the University to identify and develop such opportunities within the enabling mechanisms of the PSA.

UCD HR continues to improve its services to staff and management. Improvements include:

- Continuing to support the embedding of the Research Careers Framework, including support to the project which achieved the European Union HR Excellence in Research standard.
- Providing support to the Budget Review Committee, to manage compliance with the Employment Control Framework targets in addition to contributing significantly to a headcount forecasting exercise that was coordinated by the Bursar's Office.
- Implementing JobBridge, the National Internship Scheme to provide work experience placements for interns for a six or nine month period. It has been operating successfully in UCD throughout 2012, and there are currently 55 placements in operation across the University.
- Supporting the University in navigating developments in employment case law and related sectoral developments to ensure appropriate compliance, as well as assisting the UMT in making fully informed decisions in these matters.
- Improving staff access to HR information through updating HR IT systems.
- Supporting and assisting in the design of academic promotional pathways, the implementation of which will take place in late 2012/2013.
- Delivering targeted training to staff in a cost effective manner.

New Appointments

Appointments to Professor

The table below sets out the academic appointments in the period 1 September 2011 to 31 August 2012, to positions of Professor, and includes both new recruits to UCD and UCD staff promoted.

Name	Position	UCD College/School
Professor Maeve Conrick	Professor and College Principal	UCD College of Arts and Celtic Studies
Professor Joe Carthy	Professor and College Principal	UCD College of Science
Professor Sinisa Malesevic	Professor of Sociology	UCD School of Sociology
Professor James Jones	Professor of Anatomy	UCD School of Medicine and Medical Science
Professor Carel Le Roux	Professor of Pathology	UCD School of Medicine and Medical Science
Professor Rosa Chun	Chair in Global Leadership, Responsibility and Reputation	UCD School of Business
Professor Mark Pagell	Chair in Global Leadership, Sustainable Supply Chain Management	UCD School of Business
Professor John Cotter	Professor of Quantitative Finance	UCD School of Business
Professor Donal Bredin	Professor of Finance	UCD School of Business

Library, Information and Knowledge Management

IT Services

IT Services is the hub that enables and supports the activities of the University, the flow of information and the organisation and safe storage of data.

The focus for 2011/12 was to develop and improve existing systems and services that deliver electronic content to the UCD community. For example, by working with the UCD Library to provide the full library catalogue search facility, through the UCD Mobile application, students are now able to browse the directory and find journals on their smartphones. The second release of UCD Mobile also included enhancements to the interactive campus map, including opening hours and contact numbers for campus facilities. An Innovation tour has also been integrated, promoting key sites of Research and Innovation on campus.

A new user-friendly version of InfoHub was introduced, which streamlines the process of delivering and analysing information to units to support their decision making. Collaboration within the higher education community continues to centre on shared services and embracing innovative technologies. Blackboard Collaborate is one such technology, and this web conferencing tool and handy alternative to face-to-face meetings is now available to staff through UCD Connect. Throughout the year, UCD staff participated in user device trials to advance the teaching and learning potential that new technology offers.

Sustaining the quality of the IT Infrastructure is key to the success of running a digital campus. The number of devices on the UCD campus network rose to almost double that of 2009, and smartphone usage is on the rise.

UCD IT Services also worked with HEAnet to develop and implement their shared storage service called EduStorage. This state-of-the-art data storage is hosted in their Dublin Data Centres and delivered over the network to customers in UCD and other institutions.

UCD Library

UCD Library made substantial progress in achieving its UCD Strategic Plan objectives. It undertook a major reorganisation of structure and services to adapt to changing circumstances while also making major improvements to assessment processes, digital services and facilities.

Teaching and learning is central to the Library service vision, with a focus on partnership with academic units and e-learning. UCD Library offered a successful welcome programme to new students, with 2,500 attending tours and 1,200 availing of a new student desk. Some 645 information skills workshops were delivered, attracting 13,700 attendees. The e-learning group again received an Award for Supporting Student Learning (for its innovative suite of online tutorials and videos assisting first year undergraduates to negotiate academic resource discovery needs). UCD Library also supported the BA Programme in their successful trial of an online study skills module.

A new Library structure was implemented and staffing reorganised within a new, more flexible service framework. New library teams were put in place to meet ever-growing user expectations, and the majority of library staff also took on reframed work portfolios.

Three major Library systems were significantly updated: a new online catalogue provides a contemporary search experience while allowing for better integration of library business functions with UCD administrative systems; UCD Digital Library was inaugurated, providing a successor to the IVRLA platform for managing digital cultural heritage materials as well as research data and information; and UCD Research Repository was upgraded and, in collaboration with UCD Research, integrated with the Research Management system.

A new focus on research services is also reflected in the establishment of a Research and Innovation unit within the Library, which provides specialised support services for digital scholarship, academic assessment and specialised data services. This unit also supports the Irish Social Science Data Archive (ISSDA), which moved its administrative functions to UCD Library in 2012.

University Relations

University Relations manages the central communication strategy for the University and has specific responsibility for brand management and marketing, as well as for external and internal communication. Having increased brand awareness of UCD through the identity project, UCD *Horizons* campaigns and proactive external relations, University Relations seeks to project the activities and achievements of staff and students in order to further enhance the reputation of the University.

UCD Brand

The UCD 'brand' is central to the University's external communication strategy. It reflects UCD's strong influence and ambition. University Relations promotes the UCD brand in order to instil a sense of pride in students and staff.

This year, as part of the effort to heighten awareness of UCD's heritage, Joycean scholarship was promoted in conjunction with UCD School of English, Drama and Film. As part of this project, a major supplement on Joyce was published by *The Irish Times* on 2 February 2012 - Joyce's birthday and the anniversary of the publication of *Ulysses*.

Strategic Marketing

University Relations is responsible for the core University marketing strategy. This has been developed over the past number of years and sets out the guideline messages and strengths of UCD for each of the colleges and units to follow.

International Marketing

To support and complement the University's internationalisation strategy, a major reputation marketing campaign was launched in the international academic arena. This campaign expresses UCD's key attributes of distinction and aims to increase awareness of the University's achievements internationally.

Graduate Marketing

In-depth market research and analysis of the Irish graduate market was undertaken and an over-arching communications plan for central marketing of graduate studies developed. The summer marketing campaign launched last year was built upon and there was extensive collaboration with colleges and schools to support their planning process.

Undergraduate Marketing

University Relations drives the national marketing strategy for Irish undergraduate student recruitment. In addition to managing the advertising campaigns and video production, it leads UCD's social media strategy using networks such as Facebook and Twitter.

The UCD Life video wall continues to attract thousands of potential students and new video footage was produced on a regular basis.

Content was constantly generated for the national media aimed at school leavers and their parents. This included analysis and explanation of CAO and points patterns.

This year, coinciding with Dublin City of Science, a wide range of features was published in *The Irish Independent* 'Science for Life' supplements. These highlighted the work being undertaken by UCD scientists.

Media Relations

University Relations provides a comprehensive 24/7 service to journalists so that a clear, prompt and accurate flow of information is offered on issues of public interest relating to the University.

Working with academics, news stories and interviews on significant research outputs were prepared and issued. Examples during 2011/12 included: the discovery of a Velociraptor's last meal taken from ancient fossil remains; and tracing the origin of the 'speed gene' in modern racehorses.

University Relations is responsible for the media management of major University announcements such as the establishment of an international college in Beijing in partnership with Beijing Technical University.

Internal Communication

A consolidated staff e-zine was developed to improve information flow within UCD, and, working with UCD HR, a new internal communication checklist system was developed to assist senior managers to communicate decisions from UMT and other forums.

In May, the second UCD Staff Open House was held in conjunction with UCD Buildings and Services. Tours of period houses and new buildings were organised to help build a sense of community and appreciation for UCD's rich heritage. The event also saw the launch of a new map and guide, *Origins of the Belfield Campus and UCD's Period Houses*, produced with UCD School of Archaeology, and Buildings and Services.

Web Communication

University Relations is responsible for content on the UCD homepage, top level webpages, and the official University Facebook and Twitter sites. Examples of content produced include: the Joyce tweet of the day, which ran from February to 16 June (Bloomsday), and the conferring interviews and features.

Publications

University Relations produces *UCD Today* - the University's official magazine, as well as the *Report of the President*.

Development and Alumni Relations

The Campaign for UCD - *Forming Global Minds* shapes all of the activities of the Development and Alumni Relations Office, from engaging the support of alumni worldwide to securing donations from philanthropists. The resources so generously committed by UCD's alumni and donors contributed to the development and expansion of the University's infrastructure and intellectual capital, enabling UCD to achieve its Strategic Plan.

Development

2011/12 was a pivotal year for UCD's work in fundraising. Thanks to the enormous generosity of leading UCD graduates, corporate partners and other philanthropists, €28 million was given in donations and pledges. These private investments included one eight-figure gift and ten gifts at the seven-figure level, setting new benchmarks not just for philanthropy at UCD, but also for Ireland.

Of the four priorities for the University highlighted last year (Law, Science, Business and Sport), the campaign for Science Phase II was completed at €25.8 million and building work is well underway. The €10.9 million campaign for the UCD Sutherland School of Law was almost completed, attracting a broad base of engaged donors. The Campaign for Sport made significant strides with the opening of the new Student Centre, in summer 2012, and the launch of the UCD–Leinster Rugby Partnership. Assessment of the campaign needs for UCD School of Business is well advanced.

Work is ongoing with schools across the University to identify new priorities and opportunities within the UCD Strategic Plan that require philanthropic support. The new Energy Institute, part of UCD College of Engineering and Architecture, will be a transformational resource for energy research and development in Ireland. Private philanthropy has provided the opportunity to leverage industry and government funding for this important initiative.

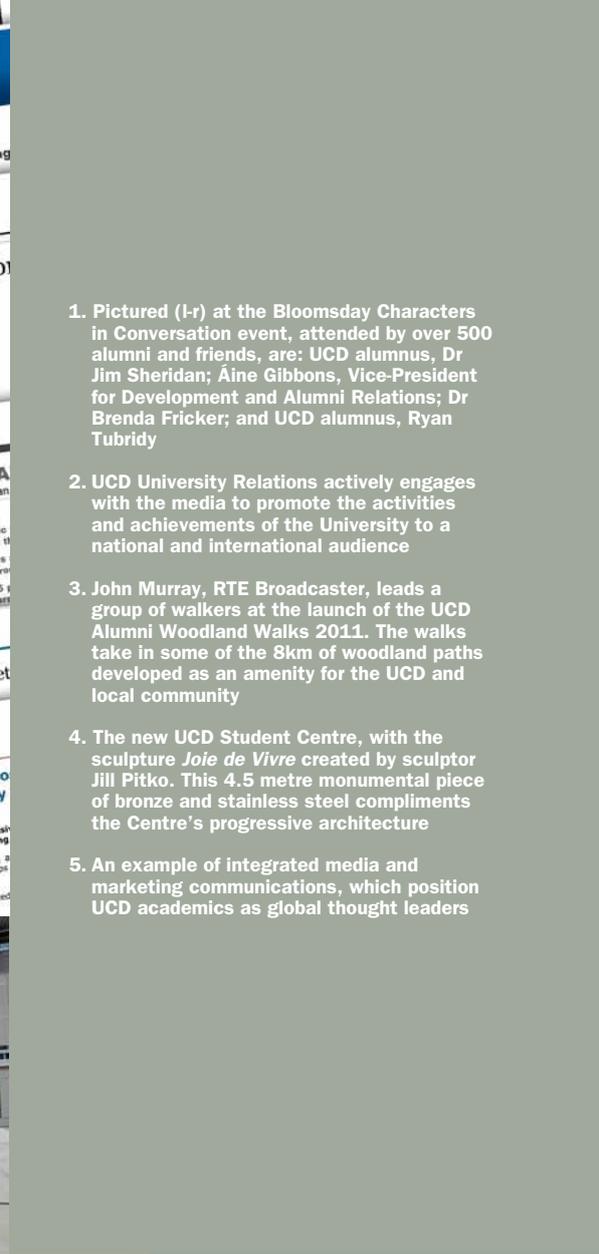
UCD's Fellowship and Scholarship programmes continued to grow. The Newman Fellowship Programme encourages the very best scholars to remain in academia, giving them the freedom to pursue a particular area of research. This year, 20 post-doctoral Newman Fellows worked in disciplines across the University. This programme is funded solely from the generous support of the

corporate and philanthropic sector. The UCD *Ad Astra Academy*, a scholarship fund set up to retain and develop the most talented students and graduates in Ireland, enrolled 75 students during the year: 39 academic scholars; 27 elite athletes; and 9 performing arts scholars. Lastly, through donations to the Alumni Fund, graduates supported many important programmes such as New ERA Scholarships, Sports Scholarships, UCD Choral Scholars, UCD Symphony Orchestra and Summer Medical Electives.

Alumni Relations

Keeping alumni in touch with events on and off campus continued to be a priority throughout the year. The annual alumni magazine, *UCD Connections*, highlights the achievements of UCD alumni from all walks of life. Six bi-monthly bulletins are sent to over 38,000 alumni via email. One of the objectives of this coming year is to increase the reach of these communications through the events and communications programme, increased participation through social media channels and increased traffic on the Alumni website.

Alumni gathered at events across the world to meet the President, deans and staff and to hear the latest UCD news. UCD School of Business events in Hong Kong, Singapore, New York and on campus enabled hundreds of alumni to connect and network. The alumni open day for the new UCD Sport and Fitness venue attracted 800 alumni, friends and families. And over 500 alumni and friends attended the Bloomsday *Characters in Conversation*, with Dr Brenda Fricker, Dr Jim Sheridan and host Ryan Tubridy. Class and year reunions continue to thrive and the launch of the UCD Alumni Woodland Walks was a great success. Two sell-out Christmas concerts for alumni were held featuring the UCD Choral Scholars.



1. Pictured (l-r) at the Bloomsday Characters in Conversation event, attended by over 500 alumni and friends, are: UCD alumnus, Dr Jim Sheridan; Aine Gibbons, Vice-President for Development and Alumni Relations; Dr Brenda Fricker; and UCD alumnus, Ryan Tubridy
2. UCD University Relations actively engages with the media to promote the activities and achievements of the University to a national and international audience
3. John Murray, RTE Broadcaster, leads a group of walkers at the launch of the UCD Alumni Woodland Walks 2011. The walks take in some of the 8km of woodland paths developed as an amenity for the UCD and local community
4. The new UCD Student Centre, with the sculpture *Joie de Vivre* created by sculptor Jill Pitko. This 4.5 metre monumental piece of bronze and stainless steel compliments the Centre's progressive architecture
5. An example of integrated media and marketing communications, which position UCD academics as global thought leaders

nature COMMUNICATIONS

ARTICLE

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The genetic origin and history of speed in the Thoroughbred racehorse

Neil A. Bonini¹, Patrick A. McGinnis², Michael S. Compton³, Jingping Gu⁴, Lisa S. Anderson⁵, Elizabeth Innes⁶, Catherine K. Davis⁷, Sofia Miksa⁸, Isabelle Sirois⁹, Vicky Vercellotti¹⁰, David G. Bruns¹¹, Alan D. Hahn¹², Susanna Lindgren¹³, David E. MacHugh¹⁴, Galina Subramo¹⁵ & Ewenorah O'Neil¹⁶

Selective breeding for speed in the racehorse has resulted in an unusually high frequency of the C-variant (g.6649373C/T) at the myostatin gene (MSTN) in embryos of the Thoroughbred horse population that are best suited to sprint racing. Here we show using a combination of molecular and pedigree-based approaches in 1011 horses from 23 European and North American horse populations, museum specimens from 12 historically important Thoroughbred stallions (1764-1930), 330 elite-performing modern Thoroughbreds and 42 samples from three other elite species that the T-allele was ancestral and there was a single introduction of the C-allele at the foundation stage of the Thoroughbred from a British-native mare. Furthermore, we show that although the C-allele was rare among the colonized stallions of the 18th and 19th centuries, it has proliferated recently in the population via the stallion Herkules (b.1924), the sire of the most influential stallion of modern times, Northern Dancer (b.1963)

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There's more to speed than meets the eye

Speed is at the heart of the world's fastest breeding industry. So where else would you expect to find...
On average, this population also identified and traced the "speed gene" for Thoroughbred racehorses...
And where else would you expect to find the university that focused a spin-out company, Equinome, that is the world leader in the use of genomic technologies for test for speed and performance in the bloodstock industry across the UK, US, Ireland, France, Australia, New Zealand, Singapore, Russia, China and Hong Kong?

At University College Dublin, we believe in the power of genetics, research to deliver commercial opportunities with international potential. Through Equinome, the university's innovative and technology transfer centre, UCD offers support to spin-out and spin-in companies both Ireland and abroad.

Discover more about Equinome and commercialisation at ucd.ie/equinome

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Extraordinary Possibilities

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Capital Development

A new epicentre of social, creative and sporting activity on the Belfield Campus was established with the completion of the new Student Centre, an international flagship for the university sector. This new, innovative Student Centre, among other facilities, offers a 50 metre Olympic specification pool, fitness and dance studios, film and drama facilities, and the new Fitzgerald Debating Chamber.

The University's commitment to providing facilities which ensure responsible energy and resource management is demonstrated in the new facility which will target a reduction of at least 40% in energy consumption and CO₂ emissions, when compared with traditional designs.

In partnership with UCD, Leinster Rugby have established a training and administration base adjacent to the UCD Institute of Sport and Health, at Newstead. The partnership will promote teaching and research collaborations across high performance science, sensor technology, bioengineering and sports physiology.

Investment in the future of education in Ireland was evident through the continued support of the University, government, philanthropy and industry for the UCD Science Centre, which will deliver cutting edge facilities for the science community and will be completed by late 2013.

In early 2012, the official signing of contracts for the new UCD Sutherland School of Law Building was attended by the Minister for Education and Skills, Ruairi Quinn TD, and Dr Peter Sutherland, the lead donor. The new building is scheduled for occupation in 2013 and will provide advanced learning environments, social interaction and clinical legal education training accommodation.

The undergraduate teaching, research and administration communities have been well served by the Newman and James Joyce Library Buildings, which were commissioned in the early 1970s. Both buildings have been operating at full capacity for many years and are in need of significant refurbishment. Procurement of an integrated design team for the Newman Joyce Precinct masterplan has commenced. Adopting principles of sustainability, this development will enhance land utilisation and minimise UCD's carbon footprint through the promotion of renewable energies and energy efficient technologies. This proposed development will build on the wider campus refurbishment programme, which delivers improved teaching, residence, library and social spaces each year.

In addition to extensive refurbishment works and as part of an overall Newman Joyce Precinct masterplan, it is envisaged that UCD may develop a new flagship building which would be a 'Gathering Place' for the Arts and Humanities, University staff and students, and the wider community.

UCD implemented a series of precinct studies to identify options for advancing an initial phase of the N11 Entrance Precinct. The University also advanced the procurement processes for the new UCD Confucius Centre. This will function as a unique national resource and centre of excellence in Chinese language and culture. It will foster and enhance business, academic and cultural links in a manner which is inclusive of institutions, organisations, agencies and the business community across Ireland.

Sustainable Campus

The efficient management of energy consumption remains an important goal for UCD. The main Belfield campus accounts for 90% of the University's total energy consumption, with the on-site gas-fired Combined Heat and Power (CHP) plant generating 9.0 GWh of electricity and 10.0 GWh of heat in 2011/12. The CHP gas consumption is included in the natural gas figure in table 1 below.

During the year energy consumption rose by 1%, but, when the University's new facilities (UCD Science Centre, UCD Student Centre and UCD Charles Institute buildings) are allowed for, an overall reduction of 5% was delivered. This was achieved due to an ongoing programme of improvements, including high efficiency boilers in the Energy Centre. Actions planned for 2012/13 include the provision of new heat exchangers to further enhance the efficiency of the campus district heating system. Smart campus initiatives will also include integration of building management systems, access control, room booking systems, and increased deployment of renewable and smart metering.

Table 1: UCD Energy Consumption

UCD Energy Consumption	2011/12
Electricity	25.4 GWh
Natural Gas	60.0 GWh
Biomass Heat	2.0 GWh
Transport Fuels	0.6 GWh
Gas Oil	0.8 GWh
Total Consumption	88.8 GWh

Awards and Honours

UCD Ulysses Medal

The highest honour that UCD can bestow, it is awarded to individuals whose work has made an outstanding global contribution.



Professor Peter Doherty

22 September 2011, in recognition of his ground breaking research as a veterinary scientist.



Dr Tony Scott

16 June 2012, in recognition of his outstanding contribution to both the teaching of physics and the engagement of the public in science.

UCD Foundation Day Medal

Awarded annually at the UCD Foundation Day Dinner to an alumnus in recognition of their outstanding achievements.



Bill Whelan

4 November 2011, composer, in recognition of his outstanding achievements and his contribution to Irish music worldwide.

Awards and Honours

Honorary Degrees



Emma Donoghue
1 September 2011, novelist and short story writer - Honorary Degree of Doctor of Literature



Garry Hynes
1 September 2011, artistic director of Druid Theatre Company - Honorary Degree of Doctor of Literature



Shirin Ebadi
16 September 2011, lawyer, former judge and author - Honorary Degree of Doctor of Laws



Andrea Camilleri
5 December 2011, writer and stage director - Honorary Degree of Doctor of Literature



Mary Gordon
5 December 2011, creative writer and academic - Honorary Degree of Doctor of Literature



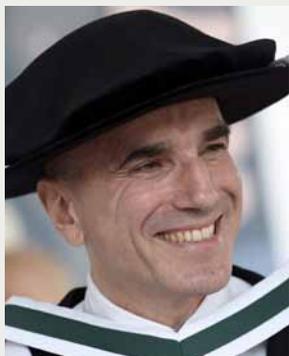
Joseph O'Connor
5 December 2011, creative writer - Honorary Degree of Doctor of Literature



Olivia O'Leary
5 December 2011, distinction in broadcasting and political commentary - Honorary Degree of Doctor of Literature



Joan Bergin
16 June 2012, Ireland's leading artist in costume design for film and theatre - Honorary Degree of Doctor of Literature



Daniel Day-Lewis
16 June 2012, actor - Honorary Degree of Doctor of Literature



Brenda Fricker
16 June 2012, actress - Honorary Degree of Doctor of Literature



Laura Mulvey
16 June 2012, theoretician, teacher and filmmaker - Honorary Degree Doctor of Literature



Jim Sheridan
16 June 2012, director, writer and producer of films - Honorary Degree of Doctor of Literature