

Institution: University of Chester

1. Context and mission

Size and Structure

The University of Chester is a learning and research community consisting of some 1,800 staff and 14,300 students drawn from across the UK and 130 countries worldwide. Comprising 7 faculties, we are located on 6 sites across Cheshire, Shropshire, and the Wirral.

Building upon the successful creation of the Faculty of Science and Engineering in 2013/14, in this REF period we established the Faculty of Medicine, Dentistry and Life Sciences, and a strategic alliance with University Centre Reaseheath. These advancements further augment our ongoing commitment to excellence in both research and teaching.

The University offers a range of research degrees, which have seen growth in recent years (more than 500 PGR students in total, including 275 MPhil/PhD and 200 Professional Doctorate candidates), as well as an extensive undergraduate and postgraduate degree portfolio.

University Mission

At the University of Chester, evolved from the Diocesan Training College founded in 1839, we continue to embody our Mission, Vision and Foundational Values in recognising:

- “the dignity and worth of every individual.”
- “the vital role of education in the service of society.”
- “the inherent value of the pursuit of truth and freedom of enquiry.”

These shape and characterise our research environment and impact activities, and help cultivate our distinctive commitments to:

- advance local and global agendas in relation to inclusion, equality, diversity and human rights;
- advance knowledge and enhance practice in the service of society;
- support innovation, invention, experimentation, and creativity to ensure a sustainable future.

We are justifiably proud of the open, inclusive, and supportive environment that characterises us, and are committed to equipping all of our students and staff with the “education, skills, support, and motivation to enable them to develop as confident world citizens, and successfully to serve and improve the global communities within which they live and work.”

2. Strategy

The University’s Research and Impact strategy focuses on four interdisciplinary Core Themes, which build upon existing strengths, reflect the institutional values, and contribute to all United Nations’ Sustainable Development Goals:

- Health and Wellbeing;
- Culture and Society;
- Sustainability and Environment;
- Regional Economy.

REF Strategy 2014-2021

The University’s Corporate Plan 2014-2020 provided a clear commitment to the creation and propagation of knowledge that is significant and vibrant, has recognised impact, supports excellence, and creates opportunities for developing sustainable, cultural, and effective communities.

We committed to:

- Host an expanding and innovative university research environment that supports world-class research;

- Create knowledge through research and innovation within and beyond academic disciplines;
- Ensure that high quality research and innovative practices contribute to exceptional learning and teaching, and help influence the development and improvement of society;
- Provide an enabling environment where adventure and risk-taking in research is valued, success is celebrated, and where setbacks are valued as learning opportunities;
- Be the clear university partner of choice in the communities we serve by contributing effectively to the economic, social, and cultural success of these communities, both in the UK and internationally.

To achieve these broader goals, we identified key priorities to enhance the University's research activities.

Improve the Number and Quality of Research Outputs Across the University

In our goal to produce more world-class outputs, the University has invested substantially in the following areas:

1. People

- a. Recruiting staff with strong research credentials and a keen desire for innovation and knowledge exchange
- b. Increasing focus on quality time spent on research, whilst retaining accountability via the staff development review process.
- c. Developing a formal application and assessment process for research leave
- d. Introducing peer mentoring to provide staff with the opportunity to develop their own skills whilst supporting and nurturing those of their colleagues
- e. The University Conference Attendance Scheme provides staff with the opportunity to present to local, national, and international audiences of both the public and their peers.

2. Facilities, equipment and services:

- a. Thornton Science Park provides staff with technical research facilities to conduct world-class research alongside 38 local businesses from the centre of Cheshire Science Corridor's Enterprise Zone, enabling knowledge exchange and seamless sharing of resources (e.g. SME incubation spaces)
- b. University Centre Shrewsbury has transformed an area low in investment in R&D and innovation into a vibrant research environment, with 300sqm of environmental laboratories and dedicated spaces for SMEs.
- c. The Storyhouse Partnership provides our staff with opportunities to engage with the public via workshops, lectures, and exhibitions, all housed alongside a nationally-acclaimed theatre company, pioneering library, and cultural centre in Chester.
- d. NoWFOOD technical centre offers a comprehensive package of support for SMEs, as well as providing R&D for established food and drink manufacturers
- e. Riverside Innovation Centre is dedicated to developing business potential by offering office space and professional conferencing/meeting facilities for small businesses in Chester. With £5.5m investment, we now provide 2,000sqm of space, of which 21 commercial companies currently take advantage.

Advancement of Research Impact

Workshops are regularly facilitated to develop academic colleagues' understanding of the applicability of research and its impact, progressing our goal of ensuring impact is at the heart of our research agenda. As a result of this, Units of Assessment (UoAs) are encouraged to identify research activities with potential for significant impact, and develop strategies to ensure research activities will intentionally engage in co-creation with communities, as well as organisations, public and private sector bodies, and governments, both nationally and internationally. We also invested in the development of our professional doctorate (DProf) degree portfolio, where students draw on the University's research expertise to investigate professional and organisational practice. We

are proud of the Impact Case Studies submitted to REF2021 and anticipate significant improvement across the institution for our impact activities.

Open Research

The University's repository, ChesterRep, provides an online platform for the wider research community and public to access research undertaken by our staff. This fulfils our responsibility to ensure research outputs are Open Access wherever possible, while adhering to copyright and licence agreements. The University's mandatory deposit policy, which includes doctoral/MPhil theses and publications by individuals asserting an affiliation with the University, has resulted in an increase of 238.7% in outputs available on ChesterRep since 2014.

CORA (Chester Open Research Alliance) is the University's grassroots interest and advocacy group for Open Research and Open Data principles and practices in both research and teaching. It attracts members from all Faculties and multiple support departments. CORA is part of the UK Reproducibility Network (UKRN) and has responsibility for the University's Open Research Statement. We are in the process of obtaining full institutional membership of UKRN to further reinforce the University's research culture improvement agenda. Representatives from CORA also run monthly ReproducibiliTea events, which contribute to the network of 100 such events across the UK. This is an Open Science journal club, which is open to all research staff but has a specific focus on Early Career Researchers.

The University is also committed to the principles of DORA (the Declaration on Research Assessment) and is committed to fulfilling the principles of the Concordat to Support Research Integrity.

Expanding Postgraduate Research Student Opportunities

During the REF2021 period, the University has introduced three new DProfs (Medicine, Public Health, and Counselling and Psychotherapy), demonstrating its ongoing commitment to research that contributes to and shapes professional practice. The University's MRes degree portfolio has been extended by the introduction of programmes on Biological Sciences, Gender Studies, and Psychology, for example. Our PGR population has increased by more than 20%, including the recruitment of our first PhD students in Engineering, Media Studies, and Modern Languages.

Increasing Grant Capture

In 2014, the University identified grant capture as a key priority, and subsequently improved infrastructure to support this (see Section 4). There have been notable successes in UoA3 (Allied Health Professions, Dentistry, Nursing and Pharmacy), UoA12 (Engineering), and UoA31 (Theology and Religious Studies). The University also developed a new approach, the Chester Grant Support Initiative (CGSI), which was formulated in conjunction with the Demand Management Policy. This scheme, involving workshops, and internal and external peer review and mentoring, was trialled in Unit 31. Their grant capture, totalling £401k between 2008 and 2013, has risen to circa £2.5m between 2014 and 2020. This has led to our commitment to extend this support across the University.

Investment in staff

The wellbeing and development of staff is central to the Mission, Vision, and Foundational Values at the University of Chester. We are proud to provide a stimulating and inclusive environment, where diversity is welcomed, and equality is continually pursued. The support networks (for women, parents, carers, LGBT+, and disabled people), which are open to all of our University community, play an active role in development of policy and its impact.

We have a longstanding active Equality Forum, chaired by a member of the University's Strategic Executive Team, which represents its members and their needs during institution-wide decision-making. As an inaugural member of the group that organised the first Chester Pride in 2013, we have continued involvement in this annual event, supporting its growth from 2,500 attendees to over 15,000.

In recognition of these activities, our Athena SWAN Bronze Award was renewed, we received the Navajo LGBTI Charter Mark, and the Bronze Award in the MoD's Employer Recognition Scheme, and we are a Disability Confident Employer.

We host an annual Diversity Festival, established in 2006, which positions equality and diversity at the centre of our agenda. Covering topics such as Neurodiversity, Money Mindfulness, Being A Part-Time Academic, and How to Make Professor, this event's success resulted in the introduction of the Research Festival in 2018. Nearly 700 people have attended events and workshops on subjects such as diversity and equality in the research environment, and approaches to grant capture. The event provides an opportunity for staff to interact with external stakeholders and regional organisations, giving the University an input into the regional economy and local priorities.

Researching Equality and Diversity

The University is committed to equality and diversity in our research activity, in the service of society and the economy, aligning with and promoting our Mission and identity. We support a rich array of interdisciplinary research activities that promote and advance understanding of equality and diversity and marginalised groups, including through supporting research projects on sexuality and identity, and publications on disability and mental health. In 2015, we established the Institute for Gender Studies, exploring questions of gender equality and inequalities, which fosters interdisciplinarity internally and attracts high profile national and international speakers. The Institute benefits from the longstanding association between the Equality and Human Rights Commission, and the departments of Law, and Theology and Religious Studies.

Strategy Beyond 2021

The University's 'Citizen Student' strategy seeks to equip staff and students with the skills and knowledge to be 'confident world citizens'. Through our vision for 'teaching-led research', the institution aims to ensure that research is embedded in all aspects of University life, and that all students are encouraged to engage in research activities and develop research skills, through co-creation where appropriate. Alongside this, and in support of the research agenda for the next five years, the University will establish research clusters aligned with the Core Themes with which staff and students will identify. These will:

- promote Chester's distinctive research priorities
- foster increased collaborative interdisciplinary, and multidisciplinary research activities, while preserving existing foci in single subject research
- facilitate increased PGR recruitment, whilst continuing to ensure access to a rich and comprehensive research environment
- provide space for PGR training, and support development of transferable skills for roles outside the institution
- focus engagement with industry, public sector bodies, and the wider economy to facilitate a clear impact agenda
- develop clear, systematic and well-understood decision-making principles to underpin the allocation of research resources between competing activities
- identify priority areas to be supported through the CGSI
- ensure that all staff remain engaged in research activities and our infrastructure is developed to support this

3. People

Staffing Strategy

The University of Chester prides itself on employing exceptional staff who bring a wealth of different skills and experience, and are emboldened to be innovative and excel at all their academic activities. We are committed to building a community of skilled and confident members of society who embrace the University's mission to care about, and contribute to, the diverse communities and environments across the globe. Undergraduate student numbers underpin the academic sustainability of all areas, and our research environment is strengthened by our commitment to engage with students at all levels of study.

In line with academic contracts, we consider the relationship between teaching and research to be symbiotic, and have established a programme of development activities that supports staff to achieve equilibrium:

- A workload management system that supports academics in balancing teaching and research responsibilities
- Training and development opportunities, including, but not limited to:
 - Mentoring and workshops for early career researchers
 - Support with first publications
 - Progression after PhD completion
 - Identifying future career pathways
- Internal funding schemes, including:
 - Research leave application process
 - Conference participation
- Grant writing and grant management support
- Access to resource, knowledge, and guidance from organisations such as UKRI, UKRIO, and Research Professional

These support mechanisms are identified, advanced, and evidenced through the Performance and Development Planning (PDP) review processes. These identify and satisfy real needs, which in turn positively impact on our equality and diversity measures, as well as staff satisfaction. For example, the process identified numerous requests for support to progress from Senior Lecturer to Professor, whereby the University introduced Associate Professorships. As a result, since 2014 40 Personal Chairs have been established and 66 Associate Professors have been appointed, of which 32% and 48%, respectively, were women.

Following the success of this, over the next five years we intend to introduce Academic Professional Researcher schemes to focus strategically on development of early- and mid-career researchers.

Professor Eunice Simmons was appointed as Vice Chancellor in 2020. Since then, a Race Equality Challenge Group has been established, which has produced positive change in the institution, as well as a set of interview competency questions designed to ensure we hire a diverse range of staff who value and promote diversity and equality across all aspects of the University.

An important development since REF2014 has been an increase in SMART target setting and monitoring in relation to research activities in staff PDPs, which enables university and local research strategies to be more effectively implemented and monitored. In several areas, a process of application for QR funded research leave was introduced, with independent review panels awarding time and evaluating outcomes, resulting in the publication of higher quality research outputs.

Support and Training for PGR Students

Since REF2014, the University has strategically created around 40 doctoral opportunities by writing PhD studentships into funding applications, as part of our approach to sustainable PGR student development. For example, we introduced the 'Sustainable Futures' scheme, and the 'ECOInnovation' bursary scheme in collaboration with Lancaster University. We will develop and build upon these to ensure that support for PGR students aligns to the research clusters and Core Themes.

The University has implemented an innovative range of activities focused on academic formation and career-readiness. Our University-wide annual PGR Conference, and many seminars and workshops (often provided at Faculty and Department level), receive positive feedback from our students. Themes include: publishing from your thesis, applying for grants, constructing an academic CV, and preparing for your first job interview. In the current REF period, successful PGR candidates have secured academic posts at Cambridge, Chester, Durham, Liverpool Hope, Leeds, Manchester, Warwick, Winchester, and York, as well as many international universities.

Our DProf programmes are delivered through a combination of live training events, research seminars, and one-to-one supervision aimed at developing research professionals to become leaders in their respective fields. Many of these programmes reflect our distinctive heritage and ongoing commitment to vocational education. Many of these students have, as a result of their doctorates, gained national leadership roles in their organisations. Others have gained academic posts in Cambridge, Belfast and Maynooth, for example.

Diversifying the PGR student body

The University of Chester recognises that a diverse student body better represents national and international interests, as well as the varied global communities and environments. We have committed to diversifying our PGR student body through an effective pipeline from undergraduate study for students from a wide range of backgrounds, as well as through DProfs. Undergraduate programmes have been adapted to reflect our research foci, incorporating research skills training and enhanced exposure to the University's research environment, which facilitates this pipeline. Institutional data from 2013-2018 shows that our undergraduates from POLAR groups 1-3 and IMD 1-3 are at least as likely to enter PGR study as those from groups 4-5. The Faculty of Science and Engineering has secured increased numbers of international PGR students. The University's Race Equality Challenge Group is taking action to ensure a more ethnically and racially diverse PGR student body, with the long-term goal of wider diversification of the academic community as a whole.

During the current REF period, the average proportion of female PGR students has been 54%, compared to 48% nationally. We also cater for a broad range of ages, having recruited 220 students over the age of 60.

We facilitate a number of PGR projects on equality and diversity questions, averaging more than 15 students per year pursuing an MRes in Gender Studies, with PhD and DProf students across the University pursuing projects in relation to religion, sexuality, gender identity, disability, dementia, and mental health.

Supporting Post-Doctoral Researchers

The University continues to invest in fixed-term post-doctoral positions, with additional funding via external grant capture, to provide opportunities for post-doctoral candidates to transition into academic posts. Through support of research projects linked to one or more of the Equality Act's protected characteristics, we have been empowered to successfully recruit a more diverse post-doctoral researcher body. This is a further expression of the University's commitment to forming a new generation of diverse academics, and we are proud that former appointees secured academic posts in institutions such as Birmingham, Bradford, Exeter, Lancaster, Leeds Trinity, and University of Wales Trinity St David, as well as one who was awarded a UKRI Future Leaders Fellowship at the University of Liverpool.

4. Income, infrastructure and facilities

Research Income Strategy

Within the current REF period, the University has been awarded £11.5m in externally funded research grants. More than 60% sat within UoA3, and 13 UoAs achieved more than £100k, including 8 that received in excess of £250k. In line with our strategy, the CGSI is set to be further developed over the next 5 years to increase research income across all UoAs, and our two new Faculties also provide a notable opportunity for advanced growth. The CGSI will continue to focus strategically on funding opportunities providing grant development support, facilitation of peer review (complemented by external expertise), as well as pre-award costing and post-award monitoring. This approach, supplemented by investment in Research Grant Development from 2020, will be key to achieving the University's aims of increasing grant capture over the next 5 years.

Investing in Research

During the current REF period, the University of Chester has invested nearly four times as much, from other sources and in support of research, as we received as a result of REF2014. A significant proportion of the annual QR funding is available for the UoAs to utilise according to their priorities. For example, UoA4 attended ACT-enhanced communication skills training, UoA5 funded travel to International conferences, UoA14 funded a Research Assistant post, UoA31 supported grant capture, and UoA25 introduced short periods of research leave for the first time. A proportion of this funding is ringfenced for impact activities and is supplemented by further investment in Knowledge Exchange from HEIF and other University sources. The focus of the remaining funding is on academic staff research time, and enabling investment in new research initiatives. Most recently, we have strategically directed investment into cross-faculty interdisciplinary research investigating the impact of Covid-19.

The investments we make are becoming increasingly focused on interdisciplinary research, spanning UoAs and Faculties, and aligned to the Core Themes. For example, research into 'flood disadvantaged' community-led approaches to flood risk resulted in a more sustainable Flood Risk Management strategy, and aligns with the Core Theme of Sustainability and Environment.

Since 2014, we have invested a further £19.9m in major infrastructure projects that support research and innovation, and engaged in significant collaborations and partnerships that enhance the facilities for research whilst contributing to wider community engagement. Upgraded laboratories, libraries, equipment, technology, and facilities have enabled us not only to sustain, but also build upon, our aim to diversify our areas of research.

Facilities Promoting External Collaboration**Specialist Support Centres**

The University brings focus and collaboration to key projects through support centres and groups across 7 research areas: Contextual Behavioural Science; Psychology of Health; Thriving; Functional Foods; Ageing, Mental Health and Veterans; and Education, Creativity and Arts through Practice. These have established wider research collaborations and augmented research methodologies, through fostering relationships with local organisations such as Storyhouse and Liverpool's Tate Gallery, as well as professional bodies and internationally-renowned partnerships.

The aims of the Westminster Centre for Research in Ageing, Mental Health and Veterans are to respond to the challenges of an ageing world to promote innovation in health and social care services for older people, and provide subject matter expertise for the betterment of military veterans and their families' wellbeing. Through the Centre, we collaborate with key partners including local councils, SSAFA, and the Royal British Legion, as well as partnerships with higher education institutions, businesses, third sector organisations including charities, veterans' associations, and the military population.

Storyhouse is one of the country's most successful arts buildings, incorporating a library, theatre, cinema, community hub, cultural centre, and restaurant. It provides a location where our research engages with diverse communities through activities such as Chester Literature Festival, Storyhouse Women, Blink Festival (for new parents), Love Later Life and The Great Get Together (for older communities), Kaleidoscope Festival (for adults with a disability), Young Takeover (a forum for young artists to display their talents internationally), and Storyhouse Festival of Languages. This partnership led, amongst other achievements, to a Senior Lead in Cultural Education and Research secondment, which has created cross-agency and pan-university public and community engagement activities.

Thornton Science Park

The 'triple helix' interaction between industry, academia, and Government at Thornton Science Park, aligning to the Core Theme of Regional Economy, has promoted innovation, collaboration, knowledge transfer, and strong economic benefits. As well as hosting our cutting-edge facilities

(such as the University's high-performance computing cluster, comprising 312 cores divided amongst 17 computer nodes linked via high-speed infiniband interconnects) and staff, it facilitates our collaboration with Alderley Park; the UK's largest single-site life science campus, and contributes to the Northern Powerhouse. Located on this site, our new Energy Centre seeks to promote growth and acceleration in the development and exploitation of technologies for the energy market, aligning to the Core Theme of Environment and Sustainability. This includes new types of photovoltaic solar cells and new algorithms for load-balancing on micro-grids, as well as developments in low-power motor drives, innovative electrical energy storage solutions, and non-electrical energy systems.

Riverside Innovation Centre is the University's home to local start-up businesses, and provides opportunities for research spin-outs. These individuals and commercial companies can take advantage of the business growth programme, as well as many other business-related projects.

NoWFOOD technical centre offers a comprehensive package of support helping SMEs as well as providing research and development for established food and drink manufacturers.

Our strategic partnership with **Reaseheath College**, a land-based institution, enables joint activities involving research into animal behaviour and welfare, ethics in animal research, and food.

Our well-established partnerships with international institutions via the **Study Abroad Team**, and memberships of Erasmus and the International Student Exchange Program (ISEP), enable students to undertake research across the globe, from the USA to Australia.

Library Resources

The University has 9 libraries, supported by specialist librarians. £5.5m of capital investment since 2014 has improved these facilities to further support research staff and students, including provision of bookable offices and meeting spaces, and specialist equipment such as high-performance computing, plus an enhanced PGR study area providing facilities for individual study, group work, training and seminars, and upgraded IT facilities. Since REF2014, the number of accessible full-text journals has increased from 21,000 to 65,000. The e-book collection has increased from 19,000 to 750,000 titles, which has been vital for the high percentage of PGR students working at a distance.

In addition to the team of Faculty Specialist Librarians, we have established a dedicated Research Support Team managed by a Research Support Librarian. The team provides a central service supporting cross-institutional research, managing the institutional repository, and working closely with the Research and Knowledge Transfer Office to support open access compliance, and ensure that it adheres to, as a minimum, the requirements of REF. A significant focus of the Research Support Team is the training and support of research staff and students: for example, in relation to IT, publications, information management, and PGR skills, in conjunction with the University Study Skills and Academic Quality and Enhancement teams.

Institutional and Faculty Infrastructure

Research activities across the University are supported and coordinated by our Research and Knowledge Transfer Office (RKTO). RKTO is led by the Director of Research and Knowledge Transfer, and the Pro-Vice Chancellor (Research and Innovation). With the aim of streamlining the route from research to impact and dissemination, RKTO provides support with identification of funding opportunities and guidance on funding applications, plus post-award project monitoring and reporting, as well as overseeing Research Ethics and Integrity, measures to support transparency and reproducibility, and Research Governance.

Research in each Faculty is overseen by an Executive Dean (or delegated Deputy/Associate Dean). Support for research varies by Faculty, but includes Faculty-wide activities (e.g. research seminars, PGR symposia, and impact training workshops), ethics committees, funding to support conference attendance and grant capture, and impact-related activities. For example, in UoA20,

Institutional level environment template (REF5a)

Faculty funding contributed to concrete changes in policy and practice that directly impacted on schools, universities, charities, and local authorities. In UoA33, research continues to impact upon the policy and practice of the European Parliament Anti-Racism and Diversity Intergroup. The interests of all faculties are represented at the University Research and Knowledge Transfer Committee, which reports to the University's Governing Body. This is complemented by the Postgraduate Sub-Committee, which addresses the interests of both PGR and PGT students, enabling the student voice to contribute fully to the shaping of policy and processes pertaining to their student experience.

Each UoA submitted by Chester to REF2021 has a named UoA Coordinator, who is a senior researcher associated with that UoA. RKTO supports UoA Coordinators by organising regular update meetings, discussing strategy, and providing review of, and assistance with, document preparation. RKTO also provides significant resource to support UoAs with expert peer review of outputs, impact case studies, and environment templates. This progresses and improves on the approach taken in previous REFs, and evidences the University's ongoing commitment to improving research quality across all aspects of REF.