Institutional Size and Shape Review 2016

1. **Background**

   With dynamic new leadership and an inspirational vision, the University is now poised for the next major step-change in its journey. Underpinning Vision 2020 is a bold culture change that will embrace the challenges ahead through collective leadership, innovation, transparency and conviction.

   Alongside this cultural change, the Vision proposes a unique combination of internationally recognised research excellence; a market-attuned, high quality educational portfolio; world class staff and students; working in an interdisciplinary and vibrant international environment. This will provide the impetus, expertise and resources to make a game-changing contribution to current and emerging global challenges that will have a profound and beneficial impact on society.

   A key driver of Vision 2020 is to become distinguished by our academic strengths in specific areas and recognised globally for our social, economic, educational and cultural impact. Critical to achieving a step-change has been a radical rethink about the size and shape of Queen's, and a reshaping of our future Vision to enable Queen's to truly compete on a world class level.

2. **Introduction**

   This paper is a culmination of a wide-ranging review of all aspects of the performance of the University and the opportunities and challenges presented by resizing and reshaping. Core aspects of the University's strategic direction which shaped the review included:

   - A new leadership and management structure to empower **academic leadership**;
   - Raised **quality** and **ambition**, through academic standards which align with being a world class institution;
   - Creation of new **Global Research Institutes (GRIs)** to increase **interdisciplinarity**, to enhance the level of **selectivity** in investment and to **raise capacity** in areas of key research strength;
   - Prioritised **postgraduate and international student recruitment** through investment in the supporting infrastructure, including a new Graduate School;
   - **Integration** of professional services into the heart of Faculties.

   The document sets out: proposals based on a comprehensive analysis of performance metrics; an assessment of the potential for delivering against corporate targets; ambitious aspirations for each Faculty and for the Professional Services; and where the University will prioritise its initial investment of some £10.5m. Proposals include:

   - A major School restructuring in the Faculty of Arts, Humanities and Social Sciences (AHSS);
   - Creation of a new School in the Faculty of Engineering and Physical Sciences (EPS);
   - Proposals to reshape and enhance the education portfolio;
   - Future priorities for research, including plans for the new GRIs and Pioneer Research Programmes (PRPs);
   - An outline of previously approved investment in each Faculty;
   - Plans at Faculty level for achieving the corporate targets;
   - Future vision and investment plans for each Faculty.

   Financial Context

   In light of the Department for Employment and Learning (DEL) funding constraints and in order to achieve the ambition of Vision 2020, the University Executive Board (UEB) agreed that a new and holistic financial strategy was required. The Board agreed a financial framework for the period 2015-16 to 2016-17, based on a break-even position. This required the four budget holders, i.e. Faculty Pro-Vice-Chancellors and the Registrar and Chief Operating Officer, to deliver a 10% budget reduction equivalent to £16.0m. The Board also approved in principle the

reinvestment of some £10.7m or 67% of the resources released, to support strategic priorities which would deliver the ambition within Vision 2020.

As previously reported, comprehensive plans to deliver the required disinvestment of £16.0m were developed by the three Faculty Executive Boards (FEBs) and the Professional Services Executive Board (PSEB). These plans identified disinvestment of £15.9m of which £15.6m has been achieved – £13.2m in pay and £2.4m in non-pay.

In line with the approved Financial Framework the disinvestment of £15.6m released resources of £10.5m to support the strategic priorities to deliver the ambition of Vision 2020.

Communication with Staff, Students and Trade Unions

The Faculty Pro-Vice-Chancellors, together with their Faculty Executive Board teams have been engaging in staff discussions at School level since the size and shape exercise began last year. Following the endorsement of the Faculty's proposals by the University Executive Board in January, the Faculties engaged in more specific communication with staff. This has included School based meetings, larger Faculty gatherings and many discussions within subject areas. Similarly, Directorates have discussed proposals for changes to the size and shape of the institution with their management teams. Where the proposals impact specifically on Directorates, for example, the targets around increased student recruitment, relevant professional staff have been closely involved with developing the plans for delivering against targets.

The Vice-Chancellor has pro-actively engaged with staff in Schools and Directorates, setting out the rationale behind Vision 2020 and actively encouraging staff involvement in the process. He has also engaged with a number of the areas directly affected by the structural changes as part of his ongoing programme of visits to all Schools. In advance of any formal proposals being taken to Senate, the Vice-Chancellor and a number of the Faculty Pro-Vice-Chancellors and Directors have had informal engagement and communication with individual members of the Student Executive on the proposals going forward. In addition, following consideration of the report by the Planning and Finance Committee on 15 March, the Pro-Vice-Chancellor for Education and Students and the Director of Academic and Student Affairs met for formal consultation with the Students' Union Executive.

The recognised trade unions have been consulted with on an ongoing basis as the Faculty Plans have evolved, through the JCNC, JCC and indeed through meetings held by the Vice-Chancellor and Senior Managers with UCU. Following consideration of the proposals by Senate, formal consultations will be completed with the trade unions. These consultations will be ongoing as the plans to implement the new structures, targets and programmes are developed.

Following consideration of the report by Senate, all staff will be invited to attend a Faculty/Professional Services presentation led by the Vice-Chancellor, to communicate the propsals which Senate has approved and to offer staff the opportunity to take part in a question and answer session.

3. **Corporate Targets**

Vision 2020 includes three major priorities for growth, as set out below:

Research	Postgraduate Provision	Internationalisation
Increase research income from **£55m** to **£110m**	Increase postgraduate profile from **23%** to **30%**	Increase international students from **8%** to **20%**

The "size and shape" review has focused on the actions and initial investments required to begin to achieve these goals. Specific annual targets have been set by Faculty and School for research income, undergraduate and postgraduate student recruitment, and international student recruitment, and a corporate summary is provided in Table 1 with details by Faculty in **Annexes 1-3**.

Table 1: *Vision 2020 Summary of Targets*

Corporate	Baseline 2015-16	Target 2020-21	Growth
Research Income	£55m*	£110m	*100%*
Students (FTE):			
UG	15,027	15,637	*4%*
PGT	2,107	3,590	*70%*
PGR	1,523	1,980	*30%*
Total Postgraduate	3,630	5,570	*53%*
International Students (FTE):			
UG	1,086	1,997	*84%*
PGT	335	1,195	*257%*
PGR	369	581	*57%*
Total International (incl above)	1,790	3,773	*111%*

*Baseline = 2014-15

The delivery of these ambitious targets will generate substantial additional income for reinvestment across the University. The initial investment fund of £10.5m combined with additional strategic invesment will represent a transformational change for Queen's. For example, this will support a major recruitment drive for some 170 additional academic staff.

At undergraduate level, the recruitment of NI and EU students is limited by government through the MaSN (Maximum Student Number). As a consequence of recent DEL budget cuts, the overall number of student places is being reduced by 1,010 over 3-4 years, and the first phase of this planned reduction was implemented in 2015-16 (-290). A recruitment target of 3,256 students (excluding Nursing) has now been agreed for 2016-17 and this will deliver a further reduction of 290 places.

The number of undergraduate students from GB is not restricted and 275 students were recruited from this source in 2015-16. There is potential to increase recruitment from GB and a target of 400 students per annum is being considered. The GB recruitment strategy will be concentrated on AHSS subject areas where the tuition fee of £9,000 (before scholarship incentives), is comparable to the level of funding received for a DEL funded student.

In March 2016, Minister Farry published a paper – *Securing a Sustainable Solution for Higher Education in NI: An Options Paper*. This paper presents a compelling case for investment in higher education to address three issues:

- The overall level of underfunding (-18% in comparison to England)
- Reinstatement of the recent reduction in student places (1,010 at Queen's)
- Expansion of student places in support of the skills required to secure the benefits of a lower rate of corporation tax.

Through Vision 2020, Queen's is committed to the development of a knowledge economy and it welcomes Minister Farry's initiative to secure a sustainable funding model. Queen's will work in constructive partnership with the Executive to develop a new model for higher education which supports the growth of a globally competitive knowledge economy – but this will require substantial new investment. The proposals in this document will be reviewed in accordance with any solution emerging from the Northern Ireland Executive.

4. **Faculty and Professional Services Sections**

The proposals relating to the size and shape of Queen's have been developed in the context of the Vision 2020 goals and a detailed analysis of all aspects of current performance, including:

- REF 2014 results;
- Student recruitment (international and domestic);
- Research (income, outputs and impact);
- Student experience (intake quality, NSS, retention, employment).

The establishment of three strong FEBs, with collective responsibility for determining and delivering the strategic plans for their respective areas, has brought a new dynamic to the leadership and management of the University. In conjunction with their FEBs, the Faculty Pro-Vice-Chancellors have each addressed the challenges of Vision 2020 with creativity and enthusiasm and each Faculty has brought forward a distinctive set of proposals for approval.

With ambitious targets in place to grow postgraduate taught and research numbers, it will be important to maximise the opportunities presented by opening of the Graduate School and the appointment of a Graduate Dean. Providing an outstanding postgraduate student experience, clearly differentiated from the undergraduate experience, will be critical if we are to succeed in changing the student profile of the University to 30% postgraduate. A major review of the Graduate School, to include the development of an ambitious Postgraduate Strategy, supported by a comprehensive business plan will outline the role of the School in bringing forward a step change in postgraduate numbers and the postgraduate student experience.

In parallel with the development of proposals for the Faculties, the PSEB has engaged in a number of initiatives to take forward the Vision 2020 agenda. These include:

- The establishment of a new Directorate – Marketing, Recruitment, Communications and Internationalisation (MRCI);
- The establishment of Faculty based Professional Services Teams;
- The creation of Faculty Student Recruitment Hubs;
- Implementation of the Digital Transformation Project;
- Investment in the "selling infrastructure" to support growth in international student numbers.

Detailed proposals for each Faculty are set out in the following sections.

5. **Faculty of Arts, Humanities and Social Sciences (AHSS)**

5.1 Vision and Challenges

In line with Vision 2020, a comprehensive review has enabled AHSS to develop a new strategy. This strategy is based on attractive, exciting and high quality undergraduate and postgraduate programmes, underpinned by stretching research income targets, a new GRI and two PRPs.

Over the next two years, the Faculty will invest in the following key developments:

- *Leadership for 2020 and beyond*;
- *Queen's Management School and the William J Clinton Leadership Institute*;
- *The Senator George J Mitchell Institute for Global Peace, Security and Justice (GRI)*;
- *Two Pioneer Research Programmes*;
- *An ambitious Marketing and Recruitment plan;*
- *New high-quality undergraduate and postgraduate programmes.*

Through these investments the Faculty will align its resources in those areas with potential to deliver against the Faculty's targets, which are:

- Increase research income from £5.4m to £8.8m;
- Increase postgraduate student numbers from 1,679 to 2,657; and,
- Increase international student numbers from 731 to 1,823.

As a result of this comprehensive review, a series of actions is proposed, as set out in the following sections.

5.2   Size and Shape Review

5.2.1   *Faculty Structure*

To deliver on the ambitious goals of Vision 2020, the Faculty has identified the need for a more effective and efficient organisational structure. The current Faculty is comprised of nine Schools and five main Institutes, which is no longer appropriate and needs to be reformed.

It is recommended that a more streamlined structure is established from 1 August 2016, based on five Schools and the GRI, as set out below. The new five School structure will create inclusive, flexible and porous structures for growing high quality teaching programmes, research themes, and knowledge transfer initiatives that will cross School boundaries. Further details of the mapping of the current structure to the proposed structure are set out in **Annex 4**.

- School of History and Political Studies*
- School of Law
- School of Literatures, Languages and Creative Practices*
- Queen's Management School
- School of Social Sciences and Education*
- The Institute of Professional Legal Studies
- The Senator George J Mitchell Institute for Global Peace, Security and Justice.
  (*The names of the three new schools remain to be confirmed.)

A new ***School of History and Political Studies*** will deliver more opportunities through additional thematically-organised, co-taught courses at undergraduate and postgraduate level, delivering teaching efficiencies and developing staff collaboration and new developments in international relations and politics. A new Masters-level programme in Irish Studies will draw on the expertise of staff in all the Faculty Schools.

The ***School of Law*** will remain in its current shape but with a renewed commitment to collaboration and partnership especially in research – e.g. with the GRI, PRPs and Management School. The new £30m building scheduled to open in summer 2016 provides a foundation for significant student growth and staff development.

A new ***School of Literatures, Languages and Creative Practices*** will bring together Creative Arts, English, and Modern Languages. Growing provision in creative writing, broadcast literacy, screenwriting and screen production, will be boosted through more collaborative and cross-disciplinary teaching, and will maximise the international recruitment opportunities in Translation and Interpreting.

The ***Queen's Management School*** is central to the Faculty and the University achieving its student growth targets and is currently undergoing a major international review. A high performing management school, with an international reputation for excellence and a number of globally competitive premium programmes, is essential and best served by this School remaining as the Queen's Management School.

A new ***School of Social Sciences and Education*** will bring together the strength of applied and theoretical research and teaching in Education, Sociology, Social Work and Social Policy, strengthening the Faculty's commitment to research and teaching focused on the needs of society.

The Institute of Professional Legal Studies remains an autonomous part of the Faculty with a review currently underway in respect of the Institute of Theology.

Strong leadership and expertise is essential so that these five new Schools can:
- Grow new research and education partnerships;
- Maximise the opportunities for curriculum innovation;

- Direct interdisciplinary potential;
- Drive the delivery of the ambitious student recruitment targets;
- Create a learning environment that is intellectually robust and employment aware;
- Align with external research funding opportunities e.g. RCUK, Horizon 2020;
- Reduce the replication of functions and processes across the Faculty.

The Institute for Collaborative Research in the Humanities (ICRH) was set up in 2012 to promote collaborative research in the humanities. In the proposed new structure, agenda-setting interdisciplinary research is embedded in the ethos of all Schools and the aims of the GRI and PRPs. In light of this overlap with the ICRH, it is being wound up. Changes in the line management of Fellows and Queen's University Fellows previously associated with ICRH have been implemented.

5.2.2   *Entry Tariffs*

The Faculty aims to raise the minimum undergraduate A-level target entry grades to ABB. This is consistent with the corporate goals of recruiting the highest quality NI students and sizable numbers of students from GB. Analysis has been undertaken to examine the potential impact of introducing higher entry grades and, based on current application patterns, this could result in an overall student intake reduction of 14%. The differential impact by subject is set out in **Annex 5** for reference.

The setting of annual undergraduate intake targets, entry grades and the associated implications for the overall University 'size and shape' will continue to be evaluated carefully, as will the potential for improved recruitment and conversion activities to mitigate against any unplanned reduction of numbers. The phased implementation of this objective, including the implementation of AAA as an entry tariff in some areas including Law (for entry 2017-18), will take into account the benefits and risks of making changes to the recruitment process but the direction of travel and ultimate objective is to raise the quality of incoming students.

5.2.3   *Resizing – Anthropology and Sociology*

The Faculty, in reviewing subject provision, identified the need to release and realign resources to respond to disciplinary changes and to increase the tariff entry scores and capacity in areas with the potential to grow student numbers and research income. This has led to a recommendation for some immediate resizing in Anthropology and Sociology. Both these subject areas have relatively low student demand, below average undergraduate intake tariff scores and staff:student ratios above the Faculty average, see Tables 2a and 2b below.

Table 2a: *Undergraduate Applications / Admissions*

Subject	Applications			Admissions		
	2012	2016	*Variance*	2012	2016*	*Variance*
Sociology	278	182	*-35%*	37	16	*-57%*
Social Anthropology	158	114	*-28%*	18	13	*-28%*

* Estimate

Table 2b: *Entry Tariff Scores*

Subject	Faculty Average Tariff	Tariff 2015-16	Variance
Sociology	382	330	-52
Social Anthropology	382	364	-18

In terms of performance in REF 2014, Anthropology achieved an outstanding 100% 4* on impact, but 50% of the outputs returned were evaluated at 2* or less. In Sociology, 42% of Sociology's

outputs were evaluated at 2* or less, while 53% of impact was rated at 2* or less. This highlights lack of depth and questions of sustainability in research in both disciplines.

The Faculty remains committed to providing a high quality curriculum that offers the opportunity for students to study both these subjects. This will be achieved by:
- maintaining joint honours undergraduate provision;
- growing new learning opportunities in quantitative methods (currently being developed as part of the Nuffield-funded Q-Step Programme); and,
- where appropriate, aligning academic staff with new areas of strategic priority, for example in more thematically-driven teaching where the disciplines of Sociology and Anthropology can be significant cross-subject enablers.

It is recommended that the provision of single honours undergraduate pathways in Anthropology and Sociology be withdrawn, with the last year of single honours enrolment in both subjects being in 2016-17. This will facilitate a resizing of the academic staffing levels in these areas, with the phased release of approximately seven posts with the opportunity for this to drive re-investment in areas with the capacity to deliver student growth and high quality research.

The University will remain committed to those students currently enrolled on these programmes (51 students in Sociology and 29 in Social Anthropology, across all years of study) and those entering in September 2016.

By strengthening the joint honours offerings in both subjects, it is hoped that student demand can be redirected to these and other programmes. The Faculty also remains committed to the delivery of the Q-Step programme, a Nuffield Foundation programme, designed to promote quantitative social science training. The discontinuation of single honours Sociology will not impact on the ability to deliver the Q-Step programme and may provide opportunity to strengthen the demand for this course.

5.2.4 *Queen's Management School (QMS) and the William J Clinton Leadership Institute (LI)*

The Management School is central to both the Faculty and the University achieving the Vision 2020 priorities. Professor Teo Forcht-Dagi (Harvard/MIT) is leading an international panel to review the Management School and the Clinton Leadership Institute and will report in April 2016. The review is expected to bring forward key recommendations to develop capacity and international reach, building on best practice in other highly performing management schools.

The School has identified gaps in areas of business strategy, negotiation, business analytics, leadership and entrepreneurship and will strengthen its teaching team with the appointment of Professors of Practice, who have many years' experience in the business world and who can deliver practical skills in the areas noted. As a matter of priority, the School is pursuing triple accreditation (EQUIS, AACSB or AMBA), a core component of all leading business Schools.

5.3 Future Vision

5.3.1 *The Education Agenda and Student Growth*

The Faculty's primary contribution to Vision 2020 is in postgraduate and international student recruitment. The targets for growth are ambitious and will require:

- A robust approach to programme planning and to the use of market intelligence;
- Targeted support, particularly for flagship programmes;
- A responsive approach to module planning; and,
- A 'refresh, renew, remove' approach to enhancing the quality of programmes;
- A strategic and tactical marketing plan.

5.3.2 *Undergraduate Programmes*

The Faculty's drive towards ABB+ sets the tone for a quality driven agenda. The Faculty has reviewed subject provision to ensure it delivers a distinctive and high-quality curriculum that attracts the best quality students – NI/EU, GB and international. While the Faculty must remain

competitive within NI, it must also be more visible and more competitive in GB, EU and internationally.

A further series of actions, focused on curriculum innovation, market position and efficient module and programme delivery, are to be implemented, and at undergraduate level, these include:

a)   Developing new thematic and interdisciplinary modules;
b)   A new BA Liberal Arts and new undergraduate level 'flexible learner journeys', combining strong disciplinary experiences with thematically organised courses;
c)   A minimum of 20 student enrolments on Levels 1 and 2 modules and 12 at Level 3 (with exceptions in selected subject areas);
d)   A strong emphasis on employability and opportunities for students to learn with non-HEI partners.

5.3.3 *Postgraduate Taught*

The Faculty intends to grow its postgraduate taught (PGT) population from 1,252 in 2015-16 to 2,060 by 2020-21. The majority of PGT growth (65%) is in international student recruitment, as set out in section 5.3.6. Whether domestic or international, the Schools of Management and Law will be the major contributors to the achievement of these postgraduate taught targets. In addition, the reputation and strength of the brand of the new GRI, the Senator George J Mitchell Institute for Global Peace, Security and Justice, will enhance the existing suite of programmes.

As with the undergraduate portfolio, a series of actions are to be implemented, and at postgraduate taught level, these include:

a) An ongoing review of the Faculty's PGT portfolio to ensure a market-attuned, research-informed and vocationally relevant programmes;
b) Partner with stakeholders in the development and delivery of the PGT offer – for example, with the BBC and the UK government-funded "What Works Networks";
c) A minimum of 12 students on modules (with exceptions in selected subject areas).

The Faculty has identified two 'priority' areas for significant PGT growth – *Management, business and related*, and *Education*.

The current programmes in the *Management, business and related* portfolio include the MSc Accounting, MSc Finance, MSc Marketing, LLM International Business Law and the MA Arts Management. New programmes for introduction to the portfolio – for example in Heritage Management and Digital Management – are being market tested. This portfolio of programmes will deliver 500 students by 2020-21.

The Education portfolio includes the MSc Applied Behaviour Analysis, PGCHETi (being developed as new subject specific offerings in Law, Business, etc), the new PGCEi and existing TESOL offer that are being targeted into specific regional markets and will, together, deliver 550 students by 2020-21.

Three other areas – *Conflict transformation and Social Justice*, *Translation and Interpreting* and the *MRes* – are identified as 'leading' opportunities: all are currently in operation and will now be developed further and marketed aggressively to deliver 160 students by 2020-21. Two others areas – *Irish Studies* and *Creative Writing* – are flagged for future development and possible investment. The Faculty will also explore the potential of the MFA qualification as a lead offer for the new School of Literatures, Languages and Creative Practices.

The Faculty is confident that the developments set out above, together with the existing PGT portfolio, will generate 2,060 PGT students by 2020-21.

5.3.4 *Postgraduate Research and Doctoral Training Initiatives*

In order to deliver on postgraduate research growth, there will be significant focus on the development of doctoral training initiatives. The Faculty has secured excellent numbers of studentships through the Arts and Humanities Research Council (AHRC)-funded Northern Bridge Doctoral Training Partnership, and discussions have already begun with Queen's consortium

partners (Newcastle University and Durham University) to prepare the bid for the next round of AHRC Block Grant Partnership funding. A bid has recently been submitted for an ESRC Doctoral Training Centre which would significantly boost the growth of high quality PGR students within Social Sciences. This work was led by the Dean of Graduate Studies and supported by an Academic Director for each of the two doctoral training initiatives. In addition, the GRI will also position the Faculty as a global leader of excellence in the areas of peace, security and justice, attracting PGR students to a number of related disciplines across AHSS.

5.3.5   *The Research Agenda*

The new Faculty research strategy, led by the Dean of Research, will support the development of thematic research areas, new emerging multi-partner ideas with more focus on external earning power, greater strategic integration with Schools and clear accountability to the FEB. The new structure is better aligned to external funding opportunities (e.g. Research Councils UK (RCUK), European Research Council (ERC), Horizon 2020) and will be developed to maximise the opportunities for both disciplinary excellence, and collaboration across disciplinary boundaries.

The Faculty is committed to increasing the value of externally funded research income, secured on an annual basis from a baseline of £5.4m in 2014-15 to £8.8m in 2020-21. The GRI and PRPs will be powerhouses for the Faculty's research and will play a significant part in delivering against the Faculty's Vision 2020 targets, particularly in the generation of research income and PGT recruitment. They will be agenda setting, collaborative, multi-disciplinary, focused on excellence and efficient in their operations.

The ***Senator George J Mitchell Institute for Global Peace, Security and Justice*** (GRI) is focused on responding to the global challenge of building a peaceful, secure and inclusive world. The rapid growth in threat and insecurity world-wide, together with Queen's experience and expertise of a society emerging from conflict, positions the GRI to deliver a compelling and unique research contribution. The GRI will connect research across all three Faculties.

The ***Centre for Innovation in Early Intervention and Prevention Research*** (PRP) builds upon existing areas of research distinction and strength by enhancing experimental design, data analysis and data optimisation in the social, educational and health sciences.

Risk and Inequality (PRP) will break new ground by developing theoretical and empirical understanding of the risk-inequality relationship. A distinguishing aspect to this PRP is a focus on economic performance, social inclusion and sustainability.

High quality discipline based research, and research that grows inter- and multi-disciplinary activity outwith the GRI and PRPs, will be a significant feature of the Faculty research strategy and many of the Faculty's leading and emerging researchers will be best supported outwith the GRI or PRP structures. This disciplinary research will evolve, over time, to become more thematic, in line with major funding opportunities. Fellowship applications, mid- and large-scale grant applications and raising the profile of research activities that grow more PGT and PGR activity will be key for disciplinary research areas. For example, development in creative writing and reviewing the potential to mobilise the local and international potential of key 'brands' associated with the new School, i.e. the Seamus Heaney Centre and Brian Friel Centre, will also be explored.

New opportunities for multi-partner research activity with the Northern Bridge partners, and others, will be supported via seed funding and enhanced 'go visit' opportunities.

5.3.6   *The Internationalisation Agenda*

Staff members in the Faculty Student Recruitment Hub have worked closely with each unit in AHSS to detail the breakdown of each of the student recruitment targets. Key investments, combined with an aggressive student recruitment strategy will now drive forward the ambitions, with the focus being on a number of programmes and target markets where intelligence suggests this growth can be achieved.

China is a key market for the Faculty, with anticipated growth for the Management School's programmes (UG and PGT), as well as PGT programmes in both Management, business and related (including Arts Management), and Education (including TESOL) and, via partnerships in Film and Visual Studies.

The second largest market for Faculty growth is North America, where there is strong potential to build on existing strength for Study Abroad and also for new and enhanced PGT programmes in Politics and International Studies, English (particularly in Poetry and Creative Writing), History, Irish Studies and the Juris Doctor (JD).

Other opportunities being targeted for growth include Malaysia and South East Asia, particularly for Law at undergraduate level where strong traction has already been witnessed within a very short time, as well as for the MSc TESOL.

5.4   Investment Opportunities

The initial investment required in this area focuses on the delivery of the ambitious student recruitment targets of Vision 2020, through staff investment in those areas required to deliver high quality student growth. This is set out in Table 3 below.

Table 3: *Summary of AHSS Initial Investment*

Description	Funding (£m)
Leadership	0.52
Queen's Management School and the Clinton Leadership Institute	0.43
Senator George J. Mitchell GRI	0.25
Programme development and offer	0.37
PRP	0.08
Faculty Student Recruitment Hub	0.60
Total	2.25

5.5   AHSS Summary

The new structure is designed to enhance and facilitate greater interdisciplinary working and provide greater management focus for delivering these challenging, but exciting, Vision 2020 goals. Together with the new leadership posts already in place, this establishes a sound platform for taking forward the ambitious plans for the Faculty.

6.   **Faculty of Engineering and Physical Sciences (EPS)**

6.1   Vision and Challenges

The EPS Faculty has undergone a major review and is now seeking to play a more focused role in addressing some of today's global challenges. To do this will require a change in shape to enable the Faculty to grow its activity and reach, in both research and education, on an international scale. A comprehensive review of the key metrics has enabled the Faculty to identify the targets which will reflect our success in meeting these challenges:

- Increase Research Income from £20m to £40m;
- Increase Postgraduate Student numbers from 1,020 to 1,450;
- Increase International Student numbers from 527 to 1,052;
- Global 100 disciplinary recognition.

6.2   Size and Shape Review

The review has focused on reshaping the Faculty and adopting a differentiated strategy which identifies specific strengths in which to invest and grow, and addresses those areas which will have limited contribution to our grand challenges and Vision 2020.

6.2.1   *Evaluation of Strengths and Weakness*

Consideration of the key metrics shows that every area in EPS has both strengths and challenges. There are notable strengths across the Faculty which will play a critical part in delivering the Faculty's ambition, for example, in cybersecurity, astrophysics, energy systems research, manufacturing and automation, composites and carbon dating, to name a few. These are seeing real successes evidenced by success through an EPSRC Centre for Doctoral Training, Royal Society and Royal Academy Fellowships and major international programmes. World leading areas, such as cybersecurity, will require investment to support the rapid growth required.

There are also significant challenges in driving up postgraduate taught numbers, and attracting high quality research income to match our ambitions. To achieve these goals the Faculty must move from traditional single disciplinary specialisms, to collaborative interdisciplinary teams focused on grand challenges. Teams will need to cut across existing structural boundaries, and some boundaries will need to be removed to make way for new perspectives and new opportunities. Research councils' delivery plans clearly call out capabilities rather than disciplines, and themes emerging from this are interdisciplinary, e.g. "Global Uncertainties" and "Energy".

6.2.2   *A New Shape for New Opportunities*

The Faculty is proposing to implement a structure outlined as below:

Six Schools
- Behavioural Sciences
- Chemistry and Chemical Engineering
- Electronics Electrical Engineering and Computer Science
- Mathematics and Physics
- Mechanical and Aerospace Engineering
- Natural, Cultural and Built Environment*
  Working title

One Global Research Institute (GRI)
- Electronics, Communication and Information Technologies (ECIT 2)

Four Pioneer Research Programmes (PRPs)
- Advanced and Interdisciplinary Radiation Research (CAIRR)
- Intelligent Autonomous Manufacturing Systems (*i*AMS)
- Sustainable Energy
- Materials and Healthcare Technologies (Match)

Two Academies of Excellence
A *Maths Academy* and a *Software Academy* (see sections 6.3.5 – 6.3.6 below).

6.2.3   *Changes to School Structure*

The new **School of the Natural, Cultural and Built Environment** will combine the key strengths of staff within the existing Schools of Planning, Architecture and Civil Engineering, and Geography, Archaeology and Palaeoecology which share many capabilities, needs and aspirations.

The new School will continue to deliver its strong foundational professionally accredited programmes within Architecture, Civil Engineering and Planning, Environment and Development. The joint strengths will enable further development of new and exciting cross-disciplinary

programmes that are unique to Queen's across its PGT and UG portfolios. These will be aligned more closely towards addressing 21st-century global challenges in emerging areas such as Smart Cities, managing urban futures, sustainability and environmental change, and building resilient cities. The new portfolio will include an amalgamation of overlapping programmes, for example, BSc Geography and Planning, and new programmes such as BSc Climate Change and Society, BSc Managing the Built Environment and BSc in Sustainable Environment. This reformulation will enable the ambition to deliver an UG intake quality towards ABB.

The School will drive a step change in its PGT portfolio and grow its international cohort by streamlining and refocusing some of the current PGT offerings, such as MSc Urban Planning and Design, and by introducing new collaborative and cross-sector courses targeted to meet international demand, such as MSc Geohazards and Geotechnics, MSc Sustainable Urban Development and MSc Smart Cities. This new portfolio will build even further on our already strong employer-linked education portfolio and provide additional capacity in rapidly expanding employment sectors (such as geoinformatics, geo sciences etc.) with partners like the Geological Survey of Northern Ireland, British Geological Survey, and the Department of the Environment.

Research synergies across the disciplines will be mobilised to meet global challenge themes on Environmental Change and Resilience, Culture and Society and Sustainable Built Environment, and thereby improve external research income, as for example with the RCUK Grand Challenge Theme in Future Cities.

The Faculty has initiated an international review of the School of Psychology, led by Dame Vicki Bruce, from the University of Newcastle. The review will determine the optimum long-term structure for delivering efficient teaching in Psychology university-wide, and investing in a focused research agenda. In the meantime, the School has been renamed the "**School of Behavioural Science**", to align with its core strengths.

6.3   Future Vision

The new structure and goals of the Faculty will provide the foundations for a step change in both the volume, quality and impact of our education and research.

6.3.1   *The Education Agenda*

The new structure of the Faculty is built around interdisciplinary Schools to provide a platform to enable the total Faculty student population to grow by 10%. This will be delivered through strong growth in our international markets (100%), expansion of the PG portfolio (42%), and potential growth in funded STEM places.

The Faculty will play a leading role in the provision of graduates across a wide range of the STEM skills needed to drive economic growth in NI, in support of the NI Executive's economic vision for NI.   Demand for these skills will become even more intense in a lower Corporation Tax environment with research showing that in some sectors, notably Software and IT, the demand for skilled workers will double.

6.3.2   *Undergraduate Programmes*

While the Faculty's home UG growth is spread across many areas, it is driven mainly by growth in two schools – Chemistry and Chemical Engineering and Natural, Cultural and Built Environment. A new cross-Faculty Natural Sciences programme, with a top entry tariff, is being introduced and driven by these two Schools. The success of the in-house "Headstart" summer school for GB students will help drive a step change in Chemistry and Chemical Engineering. The quality level across all schools will be maintained or increased.

Working closely with MRCI, the Faculty Marketing team will drive efficiency in undergraduate recruitment by implementing targeted interactions in GB, as well as efficient interaction with post primary schools in NI.

6.3.3   *Postgraduate Taught Programmes*

In order to deliver the needs of the future economy and meet our Vision 2020 challenge of moving from 446 PGT students in 2015-16 to 800 in 2020-21 (79% increase), we will drive a step change in our PGT activity. This major challenge will be met by maximising our "conversion" and growth courses and by eliminating our low demand programmes. Under the banner of "Making the Most of your Masters", we will help students to upskill and enhance their employability, and will provide an exceptional, differentiated postgraduate experience.

Alongside the new programmes proposed in the new School (see section 6.2.3), a major review of the market along with the creation of the PRPs has allowed us to bring forward exciting new courses in:
- Cyber security;
- Data Science (delivered through software academy);
- Materials Science for Innovative Engineering;
- Psychology Conversion.

These new PGT programmes are being designed with particular reference to the international market, and build on strength and reputation in key areas, such as cyber, energy and manufacturing. Plans for more programmes are underway, such as Engineering Leadership and the Cyber Physical Systems. A key enabler for this dynamic growth in PGT courses will be fast introduction and dissolution of programmes following market demand. Some 14 MSc programmes that were not attractive to prospective students or our industrial partners have already been removed.

Table 4 highlights the growth potential in some of the leading courses in our portfolio. Ultimately, we aim to have a portfolio of the order of 20 programmes with substantial numbers on each. These will be flexible and adapted according to market demand.

Table 4: *Exemplar Programmes in EPS 16-17 and targeted progression towards 2020.*

EPS		Projected Recruitment (FTE)					
Course	School / GRI	15-16	16-17	17-18	18-19	19-20	20-21
Cyber Security	ECIT	23	32	42	50	55	55
Software Development	EECS	109	110	115	120	125	130
Materials Science	M&P	0	0	20	30	40	50
MArch	NCBE	46	55	60	70	80	100
Others	All Schools	268	301	322	371	428	465
Vision 2020 Target		446	498	559	641	728	800

6.3.4   *Postgraduate Research and Doctoral Training*

The development of a truly knowledge based economy will require enhanced training for doctoral students and providing additional transferrable skills as well as broad based technical skills. The Faculty will build on the cohort based approach as exemplified by the EPSRC funded Doctoral Training Centre in Photonic Integration, and the smaller Queen's seed funded Doctoral Centres in Design and Healthcare technologies. Both the Maths and Software Academies will contribute to skills enhancement, as will a fully developed innovation and leadership academy, which will build on the Trinity-UCD-QUB Innovation Academy for doctoral students.

The Faculty will also work with its industrial partners to provide industrial doctoral programmes where students will spend significant time in industry understanding real needs as part of their doctoral studies. This will create a new breed of Doctoral graduates ready to innovate in industry, academic and society.

6.3.5   *Creation of a Software Academy*

The delivery of high quality computer science graduates to the local economy remains a high priority. However this demand puts a high strain on teaching resources. A combination of staff investment, intake control, and alternative delivery methods will be used to address this difficulty in the short term. In response to these issues a "Software Academy" will be established, which will:

- develop industry-ready graduates, particularly software engineers;
- engage employers in both design and delivery of the academic curriculum;
- expose its students to leading edge commercial tools and techniques;
- provide direct industrial involvement throughout their programme.

The Academy will be complemented by a research-led computer science degree with strong linkages to ECIT.

6.3.6   *Creation of a Maths Academy*

The industrial relevance and importance of STEM is reflected in a very strong student demand and an exceptionally high intake quality in Maths (tariff pts 429). However, the teaching of Maths is not co-ordinated across the institution, it has a high SSR, and its research capability is underutilised. Therefore, the Faculty has identified an excellent opportunity to draw upon the mathematical capabilities and needs across the institution.

The Faculty will create a "Maths Academy" which will:

- Deliver high quality specialist courses and programs (UG and PGT);
- Enhance the skill level of engineers and scientists, as well as those in humanities and social sciences, as in the national Q-Step initiative;
- Meet and increase a growing student demand, locally and internationally;
- Provide one source of excellence in Mathematics institutionally;
- Enrich existing research programmes and unlock new areas of research income.

6.3.7   *The Internationalisation Agenda*

The Faculty's international student targets are to grow from 527 students in 2015-16 to 1,052 students. This challenge will be delivered through an 80% increase in UG and a 324% increase in PGT numbers.

The Faculty's current international intake comes from approximately one third contribution each from:

- Memoranda with strategic partners (dominated by China);
- INTO Queens; and
- Directly through in-market agents.

We will develop productive alliances with a small number of strategic partners in the academic and corporate world and our top students will have international experience through study abroad or volunteering abroad. We will raise EPS's brand globally, extending and leveraging its global impact, and become a magnet for attracting international talent. Working closely with MRCI, we will concentrate on growing our brand awareness in key markets and drive our conversion success through agents.   Again, in response to market changes we will prioritise the most successful entry route.

6.3.8   *The Research Agenda*

The Faculty's aim is to double its research income from £20m to £40m by 2020-21. This will be achieved through a return on investment of £10m focused in the GRI and PRPs. The remaining research growth will be delivered across all Schools through focusing on larger grant applications aligned with global challenges.

Shifting to a global challenge based perspective provides four broad category areas:

- Information and Communication, including cyber security, internet of things, wireless communications;
- Energy Systems, including alternative energy, wind and wave, transport systems;
- Economy, Environment & Culture, including manufacturing, intelligent systems, automation, environment, culture;
- Health, including manufacturing, treatment delivery systems.

Running through all of these grand challenge areas is our natural and cultural heritage, and human behaviour. The refocused School of Behavioural Sciences and the new School of the Natural, Cultural and Built Environment will be the platform to deliver this integrating thread in addition to appropriate contributions to the PRPs.

The cross cutting nature of the PRPs and GRI along with the reorganisation of the Schools and the Academies will facilitate new interdisciplinary teams coming together to tackle new challenges. For example, teams are already forming around a "Maths Sandpit" which will aim to address research from medical to manufacturing and integrating fundamental science capabilities. They will also attract additional numbers of PG students.

6.3.9 *Global Research Institute (GRI)*

The GRI in **Electronics, Communication and Information Technologies** is the Faculty's flagship enterprise. Its outstanding technology and new ideas have had applications from satellite TV receivers to sensors installed on satellites in space. The GRI has an ambition to grow from an academic staff cohort of 30 to 48, and with a corresponding growth in research staff from 150 to 300, expanding its reach across the Faculty.

6.3.10 *Pioneer Research Programmes (PRPs)*

The **Intelligent Autonomous Manufacturing Systems (IAMS)** PRP will focus on the development of advanced manufacturing systems, enhancing the productivity of the UK manufacturing base. Engineers and Psychologists will work together to understand the implications of robots and humans in collaboration, and the changes that will be wrought by the lights out factory, where no humans work.

The **Sustainable Energy PRP** will be seeking to bring new materials and systems to bear in energy extraction and the development of green energy to reduce our dependency on fossil fuels. The PRP will contribute to wider education programmes such as petroleum engineering, and a new programme in carbon management which will cut across many spheres including the political and social context.

The **CAIRR PRP** is an inspiring model where fundamental physics research technology, as used in CERN to find the Higgs Boson, is being combined with pharmaceutical research to find new cancer treatments. Working with MHLS, this links fundamental physics research with healthcare.

The **Match PRP** will be driven initially through MHLS. EPS academic staff will engage through new collaborative proposals and as the PRP grows and develops its focus for opportunities in bio-materials and manufacturing the Faculty will invest appropriately.

6.3.11 *Enablers to Change*

A key enabler to the delivery of the EPS Vision 2020 will be a re-organisation of our Professional Services staff based in the Schools and the Faculty team. The new integrated EPS Faculty structure provides us with the opportunity for wider collaboration and efficiency. This will cover our technical, IT, clerical and overall leadership roles and responsibilities.

The second key enabler to Vision 2020 will be the creation of a state of the art collaborative Engineering Innovation Centre – D^3. This will be a world leading facility for multi-disciplinary research and education projects with state of the art technology which will enable our staff and

students to tackle real global challenges in a different way, with the Dream – Design – Deliver sequence at its core.

6.4   Priorities for Investment

Key priorities have been identified for initial investment, in order to meet the challenges of Vision 2020, and these are set out in Table 5. This reflects a reinvestment of two-thirds of the Faculty savings focusing on the priority areas of the GRI and PRP. The current investment plan tackles both the recurrent and non-recurrent needs of the Faculty with early investment in equipment and an increase of 27 academic staff over the next few years, to ensure a quality delivery of education and enhance the student experience. The focus during the first year (2016-17) on equipment will enable the successful start-up of the GRI and PRPs.

Table 5: *Summary of EPS Initial Investment*

Description	Funding (£m)
ECIT	1.05
Sustainable Energy	0.66
CAIRR	0.11
i-AMS	0.13
Other	0.30
Total	2.25

6.5   EPS Summary

The EPS Faculty has set its sights firmly on delivering Vision 2020 and beyond. The strategic approach outlined focuses on solving global challenges by enabling interdisciplinary research and education to take place daily – this will be critical to its success. The Faculty looks forward to meeting the challenge.

7.   **Faculty of Medicine, Health and Life Sciences (MHLS)**

The clear ambition of the Faculty is to create the culture and ethos of innovative thinking and scientific expertise, collaborating together and across Faculties, to deliver world class research and education that will provide maximum benefit to society; locally, nationally and internationally.

7.1   Size and Shape Review

The Faculty has undertaken a comprehensive review of all activities, to develop the optimum structures, strategies, and programmes for achievement of the ambitious Vision 2020 goals. Overarching goals for the Faculty are to:

- Increase research income from £30m to £60m;
- Increase postgraduate student numbers from 931 to 1,462;
- Increase international student numbers from 532 to 898.

A review of each School was conducted to determine the strengths, weaknesses and opportunities to allow the development of a broad-based Faculty plan.

7.1.1   *School of Nursing and Midwifery*

A comprehensive review of the School was undertaken to determine: a sustainable model moving forward; a viable research strategy; and the educational priorities. A detailed action plan for both research and education has now been established and its implementation is well underway.

The review carefully assessed the future of research in the School and concluded that, in order to be attractive as an international and a postgraduate destination, it is essential to maintain a research profile and have the capacity to enter REF assessments. The strategy involves maintaining research activity, mainly through GRI and PRP membership.

Other key issues are as follows:

- A substantial reduction in overall academic staff numbers through VS/VER;
- Broad changes to the monitoring and delivery of the education programmes;
- The potential introduction of a premium fee, graduate entry course;
- Targeting international recruitment at postgraduate level in the Gulf and China.

7.1.2 *School of Biological Sciences*

The research focus of the entire School will be directed to support the growth in quality and size of the GRI – Institute for Global Food Security (IGFS). Three new disciplinary research centres have been implemented and these are aligned to the GRI and to RCUK research priorities in food security, nutrition, animal/human health and environmental sustainability. The centres build on the areas of greatest strength within the School and also provide opportunities to build synergistic interaction across the Faculty and with the Institute for Health Sciences. The centres are:

- Ecosystem Biology and Sustainability
- Food Safety and Nutrition
- Microbe and Pathogen Biology.

The research areas of ecology and evolutionary biology do not align with prioritised disciplinary research themes or GRIs and they will be substantially reduced in size. This will facilitate the enhancement of interdisciplinary research that is more focused on key global challenges and funder priority areas. Research in these areas and new staff appointments will underpin strategic needs in the IGFS. Whilst Biochemistry remains integral to agri-food and health sciences, it will no longer be a distinct research theme and ongoing biochemistry research will align with disciplinary research themes and GRI priority areas.

Education in the areas of biochemistry, microbiology and biological sciences will be led by the School but teaching on these programmes will be supported on a Faculty wide basis by academics with the appropriate expertise through the development of an "**Academy of Biosciences**".

The development and implementation of the Academy of Biosciences will provide an enhanced education experience for students and make better use of Faculty resources. A Faculty-wide industrial placement programme will also be developed as part of the academy structure.

The School will continue to improve the quality of student intake through the transition of most of its undergraduate programmes to four and five year MSci level, with a full one year research project. Further new courses are set out in section 7.2.2 – 7.2.3.

7.1.3 *School of Medicine, Dentistry and Biomedical Sciences (SMDBS)*

The School has a number of areas of research excellence; cancer, infectious disease, diabetic complications and public/global health. Exploiting and growing these areas of strength is of fundamental importance. The newly-formed GRI - Institute for Health Sciences (IHS) has been set ambitious targets for research income, postgraduate recruitment, internationalisation and impact. This is the first phase of a substantial change agenda within the School and wider Faculty, to create a critical mass of high quality researchers and educators working in a multidisciplinary manner towards developing an internationally renowned **Global Health** research and education programme. The Faculty leadership team has embarked on the scoping of a "**College of Global Health"** which will capitalise on the current high quality research teams and pursue a strategy of growth in targeted areas.

SMDBS has three professional accredited programmes; Medicine, Dentistry and Biomedical Sciences. There are some concerns regarding the performance of Dentistry in terms of student recruitment and staffing. While the staffing situation in Dentistry has improved, a staffing deficit

remains, primarily in Restorative Dentistry. The School is engaged in discussions with the University of Liverpool on further longer term collaboration across the two Schools, to improve the sustainability of the dental programme in Northern Ireland.

A creation of a flagship Clinical Faculty Simulation Centre on the Health Sciences campus, with significant external funding, will be key to enhancing the quality of all the health sciences programmes and to supporting inter-professional education.

7.1.4 *School of Pharmacy*

The School performs consistently well on many national metrics, both for education and research. However, the development of GRIs and PRPs provides an opportunity to revise the research agenda and move towards the multidisciplinary ethos of the Faculty College for Global Health. The current two research clusters will be replaced with an outward looking focus of collaborative multi-disciplinary research across the MHLS and EPS Faculties.

The School recruits healthy numbers of international students each year to its MPhil (China) programme but accommodation constraints have stifled further expansion to date. The movement of part of the Pharmacy education programme to the RVH site will overcome this issue and provide scope for further growth in international student numbers.

7.2 Future Vision

The review process has crystallised the need for substantial changes in the culture, ethos and organisation of education and research throughout the Faculty.

7.2.1 *The Education Agenda*

The education programme across the Faculty will be reinvigorated and transformed. A range of initiatives have been planned and are currently being implemented:

- Introduction of the Academy of Biosciences from 2016-17;
- A nationally leading work placement programme;
- A new suite of undergraduate and postgraduate programmes.

7.2.2 *Undergraduate Programmes*

A significant part of the Faculty's undergraduate population is restricted by limits on professional courses within Medicine, Dentistry, Nursing and Midwifery. As such, domestic undergraduate growth will be more incremental with a focus on maintaining and increasing undergraduate quality. The transition to MSci in the School of Biological Sciences and the planned Academy of Biosciences will provide growth stimulus, and will allow increased postgraduate recruitment from Queen's undergraduate courses. New undergraduate programmes include:

- BSc Environmental Management (with Professional Studies option)
- 6 new MSci programmes (across Biological Sciences; Food Quality, Safety and Nutrition; Marine Biology; Microbiology; and Zoology) all with a Professional Studies option, will improve the intake quality and appeal in GB and international markets.

The focus for the Faculty's undergraduate growth is international, with a forecasted growth from 351 (2015-16) to 539 in 2020-21. The one year Nursing Top-up is anticipated to deliver 30 international FTE by 2020-21. Beyond this, the plan is to recruit additional international undergraduates onto the existing programmes that have significant market potential, and this will be achieved through improved marketing focus and investment in the Student Recruitment Hub. Table 6 highlights those courses that have the greatest international market potential.

Table 6: *Projected International Undergraduate Recruitment*

Course	School / GRI						
		Projected Recruitment (FTE, Population)					
		15-16	16-17	17-18	18-19	19-20	20-21
Nursing Top-Up	Nursing & Mid.	0	15	20	25	30	30
Biomedical Science	SMDBS	5	5	12	21	28	34
Pharmaceutical Science	Pharmacy	0	2	7	12	15	20
Pharmacy (MPharm)	Pharmacy	108	110	115	120	125	130
Total		113	132	154	178	198	214

The above courses are projected to deliver an increase of 101 FTE by 2020-21. The remainder of the required growth (87) will be spread across other courses within the Faculty, largely in the School of Biological Sciences.

7.2.3   *Postgraduate Taught – Growth*

The following new programmes will be central to the new Faculty plan:

- Global Food Security (DL) Cert/Dip/MSc
- Advanced Clinical Pharmacy Practice (DL) Cert/Dip/MSc
- Healthcare Education Cert/Dip/MSc (DL)
- Parasitology and Pathogen Biology MSc (Full-time)
- Molecular Pathology of Cancer Cert/Dip/MSc
- Pathology Informatics and Business Applications (DL) PG Certificate.

Introducing the new PGT courses (set out in Table 7), in conjunction with a co-ordinated marketing strategy led by the Faculty Student Recruitment Hub, will meet the Vision 2020 targets.

Table 7: *Projected PGT Recruitment*

FMHLS		Projected Recruitment (FTE)					
Course	School / GRI	15-16	16-17	17-18	18-19	19-20	20-21
Global Food Security (DL)	IGFS	-	15	24	32	36	48
Healthcare Education (DL)	SMDBS	-	15	29	40	56	68
Molecular Pathology/ Pathology Informatics	IHS	-	5	10	12	20	20
Parasitology	SBS	-	7	10	14	18	20
New Courses - Total			**42**	**73**	**98**	**130**	**156**
Existing Courses*		409	459	493	505	538	574
Total		**409**	**501**	**566**	**603**	**668**	**730**
Vision 2020 Target		-	501	566	603	668	730

* Advanced Clinical Pharmacy Practice included in Existing courses

The Faculty intends to grow its PGT population from 409 in 2015-16 to 730 by 2020-2021. Over the period, Distance Learning (DL) will account for 50% of this growth. An innovative distance learning programme in Global Food Security, designed to meet the rapidly growing global demand for education in Food Safety / Food Security, is the key flagship PGT programme in the Faculty's PGT growth strategy.

The existing face-to-face MSc in Advanced Food Safety is operating at capacity (20) with high applicant numbers (120 per year) who, when surveyed, have expressed a firm interest in a DL course. Having run two highly successful Food Security Massive Open Online Courses (MOOCs) and held very positive exploratory discussions with industry and government partners in both the

UK and overseas, confidence in significant latent demand is well-founded and discussions are ongoing to attune course content for specific markets, particularly China and South East Asia.

A proven, market leading range of Pharmacy DL programmes has been refreshed and enhanced to underpin the Faculty focus in DL and with incremental growth, it will contribute significantly to the Faculty targets.

Continuing Professional Development is an important element of the Faculty's postgraduate education provision. The new programmes in the health sciences will re-invigorate this portfolio and extend its reach into wider UK and international markets through blended and DL options. Healthcare Education (DL) is a new course, built on the foundations of the currently successful part-time Clinical Education MSc (52 FTE in 2015-16) and aims to meet the CPD needs of busy medical professionals.

The extent of the ambition and challenge in the DL PGT targets is reflected in the priority given to the DL initiative in terms of resourcing. The Faculty has prioritised investment in an academic post dedicated to lead on delivery of the Global Food Security DL plans. The Faculty also plans to create a Faculty DL Hub.

Molecular Pathology and Parasitology are courses with a lower projected recruitment but will enrich the course portfolio, reflecting the research strengths of the Faculty.

Apart from the new programmes listed above there is market informed potential for significant international growth from subject areas such as:

- Public Health
- Bioinformatics and Computational Genomics
- Translational Medicine.

In addition, the Faculty will develop a **Bio-innovation Academy** for post graduate students to equip the most talented postgraduate students with entrepreneurial and commercialisation skills.

Significant investment in the Faculty Student Recruitment Hub will bring a strategic and co-ordinated approach to marketing and recruitment. The newly-established Faculty marketing team and Faculty Recruitment Hub, working with the Faculty Deans and Schools, will target recruitment effort and resources to the new programmes and optimise recruitment to the existing courses with the greatest potential to deliver against the agreed Faculty PGT targets.

7.2.4 *Postgraduate Research Students*

Growth in postgraduate research students is intrinsically linked to the growth in research income. The Faculty has a stretching but achievable target to increase research income to £60m. The plan to deliver this involves moving the focus of applications to smaller numbers of large strategically significant awards which will, in the main, fund the growth in PGR student numbers from the current base of 522 to 732 over the next 5 years. This, together with the development of a number of Doctoral Training Programmes (DTPs) across the College for Global Health, and the plans to grow PGT numbers, will exceed the goal of 1,462 PG students by 2021.

7.2.5 *The Research Agenda*

The Faculty ambition is to bring together scientific expertise, innovative thinking and a collective drive to develop a research strategy that will be unique in terms of improving human health and wellbeing in a holistic manner. The formation of two GRIs and a PRP is a stepping stone in developing this strategy. The Faculty will continue to build strong relationships with key funders such as RCUK (especially CRUK and BBSRC), The Wellcome Trust, National Institute for Health Research (NIHR), and Horizon 2020, to secure long term partnerships.

The Faculty has started the journey towards developing a major research theme; **"Global Health"**. The quality of soil in which crops are grown, the nutrition of farm animals, the safety of the food we eat, all impact on human health. The ambition is to link these research foci to the research being undertaken in non-communicable diseases within the Faculty such as cancer and

metabolic diseases. The linkages between animal disease and human disease are well known globally, yet not established within the Faculty in terms of research effort.

To develop and build a College of Global Health into a world's leading research provider, requires a step change in attracting external research grant income. There will be a determined focus on emerging large scale funding opportunities and multidisciplinary applications to RCUK, The Wellcome Trust and Horizon 2020 funding streams. This change in direction and focus is already starting to emerge with research performance indicators at half year showing a major shift towards higher value, better quality awards and a strong pipeline of applications in development. The initial Faculty investment funds available will be concentrated on supporting the formation of The College for Global Health in terms of investment in recruiting thought leaders and building Core Technology Unit infrastructure.

A number of examples of how the Global Health plans will develop are listed below:

- Enable a step change in biomedical research through the formation of a Biomedical Research Centre;
- A new Centre for Innovations in Nutrition, encompassing animal and human nutrition research;
- A bio-innovation community, linking with global players in pharma, food, biotechnology and health sciences industries. The Precision Medicine Catapult, awarded to the Centre for Cancer Research and Cell Biology, will be a key catalyst in building this community;
- Expanding and strengthening clinical research and Phase I-III trials programmes;
- Development of Doctoral Training Programmes (DTPs) across the College for Global Health.

The development of a number of Core Technology Units (Genomics, Imaging and Mass Spectrometry) will make substantially better use of existing equipment infrastructure and foster better academic collaborations. Investment in these and further CTUs will form part of the Faculty plan.

7.2.6   *The Internationalisation Agenda*

Recruitment of substantially more international students is essential to fulfil the Vision 2020 target of 898 international students by 2021 (from the current level of 532). A co-ordinated and geographically focused Faculty plan is under development and substantial opportunities have been identified in China, Vietnam, Indonesia, the Middle East and Southern Africa.

A Faculty Distance Learning (DL) hub is being developed to host a range of new innovative courses with global importance and high demand.

The China Queen's College (CQC), has been established in China, in partnership with the China Medical University. From an initial cohort of 58 students it is projected that by 2020 the CQC population will reach some 700 undergraduate students. CQC should become a major Hub for Queen's in the Northeast of China for globally-recognised Health and Life sciences Education and Research.

The School of Medicine is supporting the creation of the Mohammed Bin Rashid University College of Medicine in Dubai Healthcare City. The first planned student intake of 40 students in 2016 will increase to 100 by 2021. This initiative has increased the recognition of Queen's University in the region reflected in an increase in student applications to the Queen's medicine programme. There is also great potential for Global Health collaboration and to take a leadership role on the wider healthcare strategy in hospital and community care development in the region.

7.2.7   *Benefits and Challenges*

The reshaping and resizing of the MHLS Faculty is an essential part of Vision 2020. A number of key challenges have been identified:

- The removal of **overlap and duplication** to deliver improved scale of operation;
- Better recognition of effort, excellence and **enhanced career opportunities**;

- The development of a single, **Workload Allocation Model** across the Faculty;
- To develop a much stronger sense of **collegiality** across the Faculty;
- Improved **connectivity and interaction** within the organisation and externally;
- Development of **leadership** within and through recruitment.

The focus of research within the Faculty has been undergoing transformation over recent years. The formation of the Institute for Global Food Security can be seen as a beacon for what can be achieved through understanding what is required at the global level and developing a strategic plan to deliver these needs. This model will be rolled out across the Faculty.

7.3   Faculty Investment

The Faculty has an opportunity to make some initial investments to drive forward the changes needed to meet and surpass Vision 2020 targets and an outline of the investment is set out in Table 8. The Faculty has supplemented the £2.42m investment available with £0.45m through reprioritisation of Faculty resources.

Table 8: *Summary of MHLS Initial Investment*

Description	Funding (£m)
Academic and support staff:	
- Global Food GRI	0.29
- Health Sciences GRI	1.28
- PRP	0.50
- Other (eg Marketing, Distance Learning)	0.29
Non-pay	0.51
Total	2.87

Note: The Faculty is also non-recurrently supporting investment of £0.48m in scientific and technical staff within the 2 GRIs.

The current investment plan is around people, with the aim to recruit up to 20 new academics over the next 12 months, at least 6 of these at Professorial level.

With further investment the aim will be to recruit up to a total of 50 new academics over the next 36 months, of which at least 15 would be at Professorial level. In addition, the recruitment of 20 Queen's Fellows into the Faculty is a priority. The Faculty will support the establishment of three Core Technology Units, and subject to further investment funding, up to five Core Technology Units would be established.

7.4   MHLS Summary

The move to much more Faculty-based education and research programmes is key to delivering Vision 2020. Achieving this will require strong leadership and support from across the University. Queen's must attract world's leading academics, at all stages of career, who will help ignite and excite the education and research agendas. Our desire is to become **the place to be** to get the highest quality education and to conduct world-leading research. By implementing the restructuring as outlined and by significant investment in people and infrastructure, this vision can become a reality.

8.   **Professional Services**

8.1   Introduction

In taking forward the delivery of Vision 2020, all areas of the University will be required to operate within a culture of shared leadership – 'one University' – creating empowered and enabled leaders, capable of combining conviction with action to deliver ambitious targets. In this context,

the Professional Services Executive Board (PSEB) has been meeting regularly throughout 2015-16 to examine the priorities emerging through the Faculty Planning process and to determine how best to respond to the opportunities and challenges these will create.

8.2   Investment Priorities

To realise the ambition of Vision 2020, taking account of the DEL funding cuts, the Board critically evaluated the priorities for targeted investment in the context of being "World Class". In doing so, the Board focused on developing a plan underpinned by how the key principles of quality, selectivity, raised institutional ambition and financial independence would shape the future delivery of Professional Services.

Throughout this process, the Board gave specific consideration to investment in priority projects emerging through the three Faculty Plans and, in doing so, identified the need to target its investment in a number of key areas – details are set out below:

(i)   Student Recruitment (£1.16m) – This investment focuses on supporting the Faculties in delivering the ambitious student recruitment targets of Vision 2020. Investment includes the development of Student Recruitment Hubs embedded within Faculties; enhanced Admissions support; and a focus on postgraduate, international and domestic recruitment. Any additional investment in this area will be informed by the Domestic Student Recruitment and International Student Recruitment Strategies, both of which are currently under development;

(ii)   Research (£756,000) – This investment focuses on the provision of an integrated portfolio of services to support Faculties in enhancing impact and increasing the value of externally funded research income, secured on an annual basis, from £55m to £110m. Areas prioritised include support for Research Institutes; streamlining of current systems and processes; provision of proactive support to Faculties in developing and coordinating interdisciplinary activities; support for the impact agenda; public engagement; and support to increase research income from EU/international funding sources;

(iii)   Support for Vision 2020 (£576,000) – This investment has supported the establishment of the new Marketing, Recruitment, Communications and Internationalisation Directorate (MRCI). The new Directorate is working cohesively to drive internationalisation goals and to deliver the ambitious targets of Vision 2020. In addition, the Directorate is supporting the new Faculties through market insight, brand development, digital marketing, international profile and an effective communications strategy which will engage positively with regional, national and international stakeholders. This development, as part of a wider realignment of Professional Services, was approved by Senate at its meeting on 23 June 2015 (Senate/P/15/12);

(iv)   The provision of Faculty-Based Professional Services Teams within the Faculties (£380,000) – This investment has allowed the PSEB to move towards fully embedding the Business Partner Model (Finance and Human Resources staff) and Student Recruitment Hubs within the Faculties, supported by the appointment of three new Directors of Operations;

(v)   Athena Swan (£165,000) – This investment will support the University's Athena Swan – Institutional Gold submission (on a non-recurrent basis);

(vi)   IT and Related Infrastructure (£286,000) – This investment focuses on the need to provide a world-class IT and related infrastructure to support education and research. Areas prioritised include the network; Open Data; High Performance Computing; Shared Services; the Wireless Campus; and supporting the effective use of technology in the delivery of teaching;

(vii)   Enhanced Support for Business Development (£110,000) – This investment is supporting the establishment of a small enhanced business development function within the University. This unit, part of the Planning Office, will assist in the identification and early stage evaluation of strategic cross cutting opportunities and initiatives, to include business case development, specific project based work, and policy evaluation;

(viii)   The Graduate School (£76,000) – This investment has supported extended opening within the Graduate School, to align with that offered by the McClay Library, as well as enhanced development programmes.

(ix)   Development and Contingency Fund (£161,000) – This investment has enabled the PSEB to respond creatively and flexibly to new opportunities which have arisen during the course of a financial year. This has included additional support for Development and Alumni Relations focused on ensuring that the Directorate has, in place, the structure and resources to take fundraising and alumni relations to a new level, commensurate with the ambitions of the University.

A summary of the total PSEB investment to date is set out in Table 9 below.

Table 9: *PSEB Investment*

Description	Funding (£m)
Student Recruitment	1.160
Research	0.756
Support for Vision 2020	0.576
Provision of Faculty-Based Professional Services Teams	0.380
Athena SWAN	0.165
IT and Related Infrastructure (*)	0.044
Enhanced Support for Business Development	0.110
The Graduate School	0.076
Development and Contingency Fund	0.161
Total	3.428

(*) Balance of £242K met from Information Services Rolling Plan

Senate considered and approved detailed cases supporting many of these proposals, each targeted at reinforcing the role of Professional Services in enabling and supporting delivery of the University's strategic objectives.

8.3   Phase 3 – Investment Plan

In the context of the University's overall Financial Plan, and performance against student and research income generation targets, the PSEB is now considering how best to align its future investment plans with those of the three Faculties. In particular, the Phase 3 investment plan will be informed by the outworkings of the following:

(i)   Review of the Graduate School;
(ii)   Domestic Recruitment Strategy;
(iii)   International Recruitment Strategy;
(iv)   Public Engagement Strategy;
(v)   Distance Learning/VLE Strategy;
(vi)   Marketing and Communications Strategy.

Consideration will also be given, in particular, to how priorities emerging from the strategies will be resourced – this will be informed by the review of financial plans, currently being taken forward by the Director of Finance.

9.   **Summary**

This report sets out a clear and vibrant direction for Queen's, adding further momentum to the implementation of Vision 2020. The wide-ranging review of "size and shape" has been undertaken by the new leadership teams at the University Executive Board, the three Faculties and Professional Services. The recommendations contained in the report are based on a comprehensive analysis of performance metrics, and a detailed reflection on the organisational and cultural changes needed to deliver on the Vision goals.

The approved Financial Framework includes provision for investment of £10.5m per annum to support the strategic priorities and the deployment of this funding is well underway. Further strategic investment will be required to achieve the Vision 2020 goals, thereby generating substantial additional funds for reinvestment. The report provides a flavour of the transformational change this will deliver.

The ethos of Vision 2020 has been crystallised in each section of the report and, as a whole, it presents a challenging, dynamic and exciting plan for how Queen's will be distinguished by its academic strengths and recognised globally for its social, economic, educational and cultural impact.

Vision 2020 Summary of Targets

Corporate	Baseline 2015-16	Target 2020-21	Growth
Research Income	£55m*	£110m	*100%*
Students (FTE) :			
UG	15,027	15,637	*4%*
PGT	2,107	3,590	*70%*
PGR	1,523	1,980	*30%*
Total Postgraduate	3,630	5,570	*53%*
Total International (inc above)	1,790	3,773	*111%*

AHSS	Baseline 2015-16	Target 2020-21	Growth
Research Income	£5.4m*	£8.8m	*63%*
Students (FTE):			
UG	5,648	5,896	*4%*
PGT	1,252	2,060	*65%*
PGR	427	597	*40%*
Total Postgraduate	1,679	2,657	*58%*
Total International (inc above)	731	1,823	*149%*

EPS	Baseline 2015-16	Target 2020-21	Growth
Research Income	£20m*	£40m	*100%*
Students (FTE):			
UG	4,760	4,904	*3%*
PGT	446	800	*79%*
PGR	574	650	*13%*
Total Postgraduate	1,020	1,450	*42%*
Total International (inc above)	527	1,052	*100%*

MHLS	Baseline 2015-16	Target 2020-21	Growth
Research Income	£30m*	£60m	*100%*
Students (FTE):			
UG	4,619	4,837	*5%*
PGT	409	730	*78%*
PGR	522	732	*40%*
Total Postgraduate	931	1,462	*57%*
Total International (inc above)	532	898	*69%*

Research Income Targets (£m)

Faculty / School	2014-15 Baseline	2016-17	2017-18	2018-19	2019-20	2020-21
Literatures and Languages	0.7	0.7	0.8	0.9	1.1	1.2
History and Political Studies	0.9	0.9	1.0	1.1	1.2	1.4
Law	0.4	0.4	0.5	0.5	0.5	0.6
Queen's Management School	0.1	0.6	0.7	0.8	0.9	1.1
Social Sciences and Education	3.3	3.5	3.7	3.9	4.2	4.5
Arts, Humanities and Social Sciences sub-total	**5.4**	**6.1**	**6.7**	**7.2**	**7.9**	**8.8**
Mechanical and Aerospace Engineering	1.9	3.1	3.7	4.9	6.5	6.6
Natural, Cultural and Built Environment	3.2	3.8	3.8	4.3	5.2	5.3
Electronics, Electrical Engineering and Computer Science	5.4	6.6	8.8	11.7	13.8	15.0
Chemistry and Chemical Engineering	3.4	3.8	3.9	4.3	4.8	4.9
Maths and Physics	5.3	5.2	5.3	6.1	6.7	6.8
Behavioural Sciences	0.6	0.8	1.1	1.3	1.5	1.5
Engineering and Physical Sciences sub-total	**19.8**	**23.3**	**26.6**	**32.6**	**38.5**	**40.1**
Medicine, Dentistry and Biomedical Sciences	20.5	27.3	29.6	32.8	37.2	40.1
Biological Sciences	6.0	7.1	7.5	9.1	10.6	12.5
Pharmacy	3.3	3.8	4.3	5.2	5.2	6.5
Nursing and Midwifery	0.6	0.7	0.7	0.8	1.0	1.3
Medicine, Health and Life Sciences sub-total	**30.4**	**38.9**	**42.1**	**47.9**	**54.0**	**60.4**
Total	**55.7**	**68.3**	**75.4**	**92.7**	**100.5**	**109.3**

GRI	2016-17	2017-18	2018-19	2019-20	2020-21
Institute for Health Sciences	27.3	29.6	32.8	37.2	40.1
Institute for Global Food Security	5.3	5.7	7.0	8.1	9.3
Institute of Electronics, Communications & Information Technology (ECIT)	5.0	6.0	8.0	9.5	11.0
The Senator George J Mitchell Institute for Global Peace, Security and Justice	1.4	1.5	1.9	2.1	2.1
Total	**39.0**	**42.8**	**49.7**	**56.9**	**62.5**
Percentage of Total Income *(excludes PRPs)*	57%	57%	54%	57%	57%

Total Student FTE Baseline and Vision 2020 Target

Faculty/School	2015-16 Baseline				2020-21 Target				Variance			
	UG	PGT	PGR	Total	UG	PGT	PGR	Total	UG	PGT	PGR	Total
AHSS												
Literatures, Languages and Creative Practices	1,245	97	111	1,452	1,230	175	140	1,545	-15	78	30	93
History and Political Studies	1,145	139	101	1,384	1,111	280	145	1,536	-34	141	45	152
Law (incl. IPLS)	693	325	65	1,083	753	405	92	1,250	60	80	27	167
Queen's Management School	1,531	205	35	1,771	1,790	550	71	2,411	259	345	37	640
Social Sciences and Education	1,034	435	116	1,585	1,012	650	149	1,811	-22	215	33	226
Clinton Leadership Institute	0	38	0	38						-38	0	-38
Mitchell Global Peace, Security & Justice Institute	0	13	0	13						-13	0	-13
AHSS sub-total	**5,648**	**1,252**	**427**	**7,327**	**5,896**	**2,060**	**597**	**8,553**	**248**	**808**	**170**	**1,226**
EPS												
Mechanical & Aerospace Engineering	734	19	49	802	713	75	67	855	-21	56	18	53
Electronics, Electrical Engineering and Computer Science	1,445	139	105	1,688	1,520	210	117	1,847	75	72	12	159
Chemistry & Chemical Engineering	540	22	123	685	587	60	145	792	47	38	22	108
Maths and Physics	675	5	129	810	713	70	157	940	37	65	28	130
Natural, Cultural and Built Environment	867	217	89	1,172	882	300	106	1,287	15	84	17	115
Behavioural Sciences	500	45	79	624	491	85	58	634	-9	40	-21	10
EPS sub-total	**4,760**	**446**	**574**	**5,780**	**4,904**	**800**	**650**	**6,355**	**144**	**354**	**77**	**575**
MHLS												
SMDBS	1,868	160	202	2,230	1,940	248	257	2,445	72	88	56	215
Biological Sciences	775	111	152	1,037	827	228	240	1,295	52	117	89	258
Pharmacy	454	81	143	678	485	178	201	864	31	97	58	186
Nursing & Midwifery	1,522	57	26	1,605	1,585	76	34	1,695	62	19	8	90
MHLS sub-total	**4,619**	**409**	**522**	**5,550**	**4,837**	**730**	**732**	**6,299**	**218**	**321**	**210**	**749**
University Total	**15,027**	**2,107**	**1,523**	**18,657**	**15,637**	**3,590**	**1,980**	**21,207**	**610**	**1,483**	**457**	**2,550**

Note: Undergraduate variance includes: a reduction in DEL funded students (-720); and an increase in GB (+400) and international (+911) students

International Undergraduate Target Population by School Annex 3b

Faculty/School	2015-16 Baseline	2016-17	2017-18	2018-19	2019-20	2020-21
AHSS						
Literatures, Languages and Creative Practices	22	26	30	36	42	50
History and Political Studies	49	52	55	60	65	70
Law	64	70	90	105	130	150
Queen's Management School	239	256	355	435	485	521
Social Sciences and Education	6	7	9	11	13	15
AHSS sub-total	**380**	**411**	**539**	**647**	**735**	**806**
EPS						
Mechanical & Aerospace Engineering	81	93	105	86	88	97
Electronics, Electrical Engineering and Computer Science	74	80	106	105	120	140
Chemistry & Chemical Engineering	58	55	75	87	94	102
Maths and Physics	34	32	34	38	43	50
Natural, Cultural and Built Environment	93	125	178	207	220	237
Behavioural Sciences	15	13	14	18	25	26
EPS sub-total	**355**	**398**	**512**	**541**	**590**	**652**
MHLS						
SMDBS	212	227	240	252	254	249
Biological Sciences	12	20	33	42	55	64
Pharmacy	110	112	122	124	132	150
Nursing & Midwifery	17	21	39	54	71	76
MHLS sub-total	**351**	**380**	**434**	**472**	**512**	**539**
University Total	**1,086**	**1,189**	**1,485**	**1,660**	**1,837**	**1,997**

International Postgraduate Taught Target Population by School   Annex 3c

Faculty/School	2015-16 Baseline	2016-17	2017-18	2018-19	2019-20	2020-21
AHSS						
Literatures, Languages and Creative Practices	17	26	38	50	62	75
History and Political Studies	17	29	42	58	74	90
Law (incl. IPLS)	26	36	49	62	78	100
Queen's Management School	100	126	186	246	306	370
Social Sciences and Education	45	62	84	102	128	150
Clinton Leadership Institute	4					
Mitchell Global Peace, Security & Justice Institute	6					
AHSS sub-total	**215**	**279**	**399**	**518**	**648**	**785**
EPS						
Mechanical & Aerospace Engineering	3	7	13	20	28	35
Electronics, Electrical Engineering and Computer Science	15	23	27	33	39	45
Chemistry & Chemical Engineering	11	16	19	22	26	30
Maths and Physics	0	0	12	18	24	30
Natural, Cultural and Built Environment	22	28	49	63	76	90
Behavioural Sciences	8	11	13	15	18	20
EPS sub-total	**59**	**85**	**133**	**171**	**211**	**250**
MHLS						
SMDBS	16	24	27	30	33	35
Biological Sciences	25	54	65	65	68	72
Pharmacy	0	0	15	20	22	28
Nursing & Midwifery	20	23	25	25	25	25
MHLS sub-total	**61**	**101**	**132**	**140**	**148**	**160**
University Total	**335**	**465**	**664**	**829**	**1,007**	**1,195**

International Postgraduate Research Target Population by School

Faculty/School	2015-16 Baseline	2016-17	2017-18	2018-19	2019-20	2020-21
AHSS						
Literatures, Languages and Creative Practices	25	27	29	33	36	40
History and Political Studies	28	31	35	39	42	47
Law	38	42	46	50	54	60
Queen's Management School	16	21	26	32	38	45
Social Sciences and Education	29	31	33	35	37	40
Clinton Leadership Institute						
Mitchell Global Peace, Security & Justice Institute						
AHSS sub-total	**136**	**152**	**169**	**189**	**207**	**232**
EPS						
Mechanical & Aerospace Engineering	13	14	15	17	18	19
Electronics, Electrical Engineering and Computer Science	39	40	41	41	42	43
Chemistry & Chemical Engineering	39	40	41	41	42	43
Maths and Physics	9	9	10	10	11	11
Natural, Cultural and Built Environment	12	14	17	20	22	24
Behavioural Sciences	1	3	5	6	8	10
EPS sub-total	**113**	**120**	**129**	**135**	**143**	**150**
MHLS						
SMDBS	28	23	23	22	29	36
Biological Sciences	13	12	14	15	20	25
Pharmacy	74	87	91	116	122	125
Nursing & Midwifery	5	5	5	6	10	13
MHLS sub-total	**120**	**127**	**133**	**159**	**181**	**199**
University Total	**369**	**399**	**431**	**483**	**531**	**581**

Home and EU Postgraduate Taught Target Population by School (FTE)

Faculty/School	2015-16 Baseline	2016-17	2017-18	2018-19	2019-20	2020-21
AHSS						
Literatures, Languages and Creative Practices	80	82	85	89	94	100
History and Political Studies	122	149	157	167	178	190
Law (incl. IPLS)	299	287	293	298	302	305
Queen's Management School	105	118	132	148	163	180
Social Sciences and Education	390	414	436	456	478	500
Clinton Leadership Institute	34					
Mitchell Global Peace, Security & Justice Institute	7					
AHSS sub-total	**1,037**	**1,050**	**1,103**	**1,158**	**1,215**	**1,275**
EPS						
Mechanical & Aerospace Engineering	16	18	18	25	30	40
Electronics, Electrical Engineering and Computer Science	124	130	140	150	160	165
Chemistry & Chemical Engineering	11	13	16	20	25	30
Maths and Physics	5	5	10	25	35	40
Natural, Cultural and Built Environment	195	200	205	205	210	210
Behavioural Sciences	37	37	37	45	57	65
EPS sub-total	**387**	**403**	**426**	**470**	**517**	**550**
MHLS						
SMDBS	144	158	163	175	200	213
Biological Sciences	86	110	116	124	151	156
Pharmacy	81	88	111	120	122	150
Nursing & Midwifery	37	44	44	44	47	51
MHLS sub-total	**348**	**400**	**434**	**463**	**520**	**570**
University Total	**1,772**	**1,853**	**1,963**	**2,091**	**2,252**	**2,395**

Note: Includes GB

Home and EU Postgraduate Research Target Population by School (FTE)

Faculty/School	2015-16 Baseline	2016-17	2017-18	2018-19	2019-20	2020-21
AHSS						
Literatures, Languages and Creative Practices	86	103	100	100	96	100
History and Political Studies	73	84	87	91	93	98
Law	27	28	29	30	31	32
Queen's Management School	19	20	22	24	25	26
Social Sciences and Education	87	104	104	109	105	109
AHSS sub-total	**291**	**339**	**342**	**354**	**350**	**365**
EPS						
Mechanical & Aerospace Engineering	36	34	37	42	45	48
Electronics, Electrical Engineering and Computer Science	66	58	61	66	70	74
Chemistry & Chemical Engineering	84	83	88	95	99	102
Maths and Physics	120	122	127	135	141	146
Natural, Cultural and Built Environment	77	63	65	72	75	82
Behavioural Sciences	78	34	36	40	44	48
EPS sub-total	**461**	**394**	**414**	**449**	**474**	**500**
MHLS						
SMDBS	174	183	191	202	211	221
Biological Sciences	139	138	145	164	188	215
Pharmacy	69	74	79	81	80	76
Nursing & Midwifery	21	10	13	18	20	21
MHLS sub-total	**402**	**405**	**428**	**465**	**499**	**533**
University Total	**1,154**	**1,138**	**1,184**	**1,268**	**1,323**	**1,399**

Note: Includes GB

Undergraduate NI and EU FTE (excludes GB)

Faculty/School	2015-16 Baseline	2016-17	2017-18	2018-19	2019-20	2020-21
AHSS						
Literatures, Languages and Creative Practices	1,142	1,097	1,052	1,030	1,030	1,030
History and Political Studies	970	913	856	828	828	828
Law	602	584	566	557	557	557
Management	1,262	1,241	1,220	1,209	1,209	1,209
Social Sciences and Education	1,014	997	981	973	973	973
AHSS sub-total	**4,990**	**4,832**	**4,675**	**4,597**	**4,597**	**4,597**
EPS						
Mechanical & Aerospace Engineering	627	605	583	572	572	572
Electronics, Electrical Engineering and Computer Science	1,358	1,358	1,358	1,358	1,358	1,358
Chemistry & Chemical Engineering	448	440	432	428	428	428
Maths and Physics	610	610	610	610	610	610
Natural, Cultural and Built Environment	710	641	571	537	537	537
Behavioural Sciences	463	449	435	428	428	428
EPS sub-total	**4,215**	**4,102**	**3,989**	**3,932**	**3,932**	**3,932**
MHLS						
Medicine, Dentistry and Biomedical Sciences	1,441	1,441	1,441	1,441	1,441	1,441
Biological Sciences	723	712	701	696	696	696
Pharmacy	331	324	316	313	313	313
Nursing and Midwifery	1,500	1,500	1,500	1,500	1,500	1,500
MHLS sub-total	**3,995**	**3,977**	**3,959**	**3,950**	**3,950**	**3,950**
University Total	**13,200**	**12,912**	**12,623**	**12,479**	**12,479**	**12,479**

Note:

Planned reduction in numbers of 720 arising from DEL budget cuts in 2015-16 (-1,010 in total).

Distribution of reduction by School will be subject to annual sudent intake.

Faculty/School	2015-16 Baseline	2016-17	2017-18	2018-19	2019-20	2020-21
AHSS						
Literatures, Languages and Creative Practices	81	90	104	120	138	150
History and Political Studies	126	137	156	175	194	213
Law	27	29	33	38	42	46
Management	30	34	39	45	52	60
Social Sciences and Education	14	15	17	19	22	24
AHSS sub-total	**278**	**305**	**349**	**397**	**448**	**493**
EPS						
Mechanical & Aerospace Engineering	26	28	32	36	40	44
Electronics, Electrical Engineering and Computer Science	13	14	16	18	20	22
Chemistry & Chemical Engineering	34	37	42	47	52	57
Maths and Physics	31	34	38	43	48	52
Natural, Cultural and Built Environment	64	69	79	89	98	108
Behavioural Sciences	22	24	27	31	34	37
EPS sub-total	**190**	**206**	**235**	**264**	**292**	**320**
MHLS						
Medicine, Dentistry and Biomedical Sciences	215	250	250	250	250	250
Biological Sciences	40	43	49	56	61	67
Pharmacy	13	14	16	18	20	22
Nursing and Midwifery	5	5	6	7	8	8
MHLS sub-total	**273**	**313**	**322**	**330**	**339**	**348**
University Total	**741**	**824**	**906**	**991**	**1,079**	**1,161**

Note:

Assumes growth of 80 per annum, pro-rata to existing subject profile (excluding Medicine and Dentistry).

Arts, Humanities and Social Sciences Structure

2015-16 Structure	2016-17 Proposed Structure
School of English	**School of Literatures, Languages and Creative Practices**
School of Modern Languages	English
School of Creative Arts	Creative Arts Modern Languages
School of History & Anthropology	**School of History and Political Studies**
School of Politics, International Studies & Philosophy	History & Anthropology Politics, International Studies & Philosophy
School of Law	**School of Law**
School of Management	**Queen's Management School***
The William J Clinton Leadership Institute	The William J Clinton Leadership Institute*
School of Sociology, Social Policy & Social Work	**School of Social Sciences and Education**
School of Education	Sociology, Social Policy & Social Work Education
Institute for the Study of Conflict Transformation and Social Justice	**The Senator George J Mitchell Institute for Global Peace, Security and Justice**
Institute of Professional Legal Studies	Institute of Professional Legal Studies
Institute of Theology	Institute of Theology
Institute for Collaborative Research in the Humanities	To cease from 31 July 2016

Notes:
*Review Ongoing
Titles of new Schools are placeholders.

AHSS: Potential impact of application of ABB (or equivalent), as minimum entry tariff

Subject	2015 Student Intake*	Students with *ABB* or higher	Potential reduction	% reduction
English	118	99	19	*16%*
History	118	80	38	*32%*
Social Anthropology	13	9	5	*35%*
Philosophy	18	9	9	*51%*
PPE	19	19	0	*0%*
Politics and International Studies	84	61	24	*28%*
Music and Sonic Arts	56	44	12	*21%*
Drama	23	16	7	*31%*
Film Studies	50	32	18	*36%*
French	30	23	7	*22%*
Irish and Celtic	19	11	8	*42%*
Spanish	38	31	7	*17%*
Law	231	229	2	*1%*
Accounting	65	64	1	*1%*
Actuarial Studies	40	40	0	*0%*
Business Management	124	117	7	*6%*
Economics	66	62	4	*5%*
Finance	86	86	0	*0%*
Social Work	107	105	2	*2%*
Sociology / Criminology	107	70	37	*35%*
Total	**1,409**	**1,205**	**204**	***14%***

* NI and EU