Background

The University of Sunderland Integrated Curriculum Design Framework (i-design) brings together, for the first time, various key policy drivers such as embedding graduate attributes, promoting employability and developing an inclusive curriculum which enhances the student experience. The i-design framework consists of a model of curriculum development (consisting of six stages) and a set of curriculum elements which are embedded in the model.

Models of curriculum design enable us to articulate what students will learn but also describe how they will learn, be taught and assessed. A new curriculum design model will help drive pedagogical innovation and ensure that key principles, such as Universal Design for Learning, are embedded into programmes.

Many universities adopt ‘product’-based curriculum design models with a focus on the end point of the graduate (O’Neil, 2010). Such a model is most often used when education focusses on graduates’ contribution to society, either through work or by shaping the future of communities.

This document sets out how the Integrated Curriculum Design Framework aims to:

- Ensure that our programmes are aligned to Graduate Attributes and actively promote employability.
- Promote innovation in teaching delivery and assessment, to ensure that our learners are engaged through a multiplicity of approaches to engaged active learning.
- Integrated programme design with the University Strategic Plan.
- Enhance the integration of research and teaching through the development of research-active curricula.
- Ensure that our programmes are inclusive through the adoption of Universal Design for Learning principles.

The Framework is not about making every programme the same but it is more about ensuring that our programmes are designed against a set of key principles. Many programmes already address many of the key principles outlined in this framework and there are numerous excellent examples of outstanding practice in teaching, learning and assessment across the University. The Integrated Curriculum Design Framework is about making sure all of our provision reaches the highest standards to facilitate student engagement and success.
The Framework

The Curriculum Design (i-design) Framework consists of six phases with five integrated elements (see Figure 01 page eight. It is important to note that the phases are not meant to be linear and that each phase may overlap or be run concurrently with other development activities.

The Framework phases are:

**Phase One: Curriculum Vision**

This stage involves visioning the future curriculum. Programme teams should consider feedback from current and past students as well as actively talking to key stakeholders such as Professional Bodies and employers. The programme team will consider the skills, knowledge and attributes a graduate will need in the next 5-10 years. For many of our programmes this stage will require academic staff to ‘horizon scan’ within their own profession, identifying changes in the way in which graduates will be expected to work in the future. In addition, courses requiring Professional Statutory or Regulatory Body (PSRB) approval will need to ensure the programme aligns to these requirements.

The Graduate Attributes element, of the framework, will be engaged during this phase as it is important that the curriculum vision has a clear idea of how the programme will produce graduates who are not only able to meet the professional requirements but demonstrate achievement of the University’s graduate attributes. This phase links to Future Shapers and Life Changers in the University’s strategy as it aims to ensure that our graduates lives are transformed and that they are equipped with the skills, knowledge and ability to shaper with own and societies future.

![Future Shapers](image1) ![Life Changers](image2)

**Phase Two: Participation**

The participation stage relates to the basic premise that programme teams should not develop curricula without actively involving students, employers, other key stakeholders and where relevant professional bodies. Participation can be achieved through a number of means including having advisory and stakeholder groups or involving individuals at various points in global café events.

**Phase Three: Mapping the Curriculum**

This stage involves writing programme learning outcomes and mapping where these are addressed and assessed. The programme learning outcomes should be developed with the graduate attributes in mind thereby engaging the graduate attributes element in this phase of curriculum design.

Some programmes will also identify how and where competencies are assessed alongside other educational outcomes.
Programme teams are asked to consider how the programme will prepare the student for employment. In some disciplines this may be focused on a module which eases the student’s transition into a new graduate role. Other programmes may need to consider wider employment related skills much as applying for jobs, preparing a curriculum vitae etc. By focusing on employability the curricula will describe how we will prepare students for the future and the world of work ensuring our curricula respond to the University’s strategy as part of the element related to Tomorrow Makers.

The curriculum map will also examine the structure of each stage of the programme in terms of number and size of modules and whether these are delivered on a semesterised or year-long basis. When considering programme structure teams should be mindful of assessment schedules from the student’s point of view and the need to provide feedback on assessed work to meet Universal Design for Learning Principles.

**Phase Four: Design**

In terms of curriculum development, the design phase is critical to a successful programme. During this phase teams develop modules, identify the programmes learning and teaching and assessment strategies. Four key elements are embedded into this phase, Universal Design for Learning, Engaged Learning, Employability and, incorporating Research Active elements into the curriculum.

Universal Design for Learning and Engaged Learning relate principally to the programmes learning and teaching strategy and the variety and nature of assessment within the programme. Programme teams should think carefully how they have embedded support for students making the transition into higher education and those transitioning from one academic stage to another. This together with building a sense of belonging and developing the student’s assessment literacy are key components of a curricula which supports student success, attainment and student retention.

Employability can be promoted in a number of different ways from work placements, study abroad to support within modules related to applying for jobs and preparation for interviews. The University has developed a number of modules which are designed to help support programmes with meeting these needs alongside providing opportunities for students to learn new skills unrelated to their undergraduate programme.

Finally, the Research Active curriculum will seek to develop critical thinking, research and problem-solving skills amongst students. The approach taken will differ between disciplines but at a fundamental level staff would be able to incorporate their and colleagues research into teaching and students should have an opportunity to experience the research vibrant community by attending seminars and events where researchers showcase their work.
Phase Five: Align and Plan Delivery

Phase five involves checking the constructive alignment of the outcomes, learning and teaching plan and assessment (Biggs, 1996). In addition, programme teams should ensure that the planned curriculum can be delivered in the resource envelope available. This involves working up the overall workload for programme delivery based on the Notional Student Workload. In addition, the programme team should think about the resource requirements in terms of specialist teaching staff, facilities and consumables. Where necessary programme teams should seek guidance from Faculty Management and Team Leaders about the resource requirements associated with programme delivery.

Boundary Breakers

Phase Six: Review and Revise

In order to ensure programmes are contemporary and leading the field programme teams should seek every opportunity to review delivery. This includes established mechanisms such as student feedback, Staff Student Liaison Committees and Programme Studies Boards. In addition, Annual Programme Monitoring provides an annual check on programme issues. As necessary programme teams should seek amendments to programmes to address concerns identified or to enhance programmes further.

The continued review and revision of programmes is an important element of both quality assurance and enhancement but it also helps the University to stay at the forefront of programme design and delivery ensuring we continue to break new ground and push the boundaries.
Figure 01: University of Sunderland Curriculum Design Framework Stages and their relationship to the elements
The Framework Elements

The University’s Curriculum Design model is built around a framework of complementary elements which bring together, for the first time, a number of key priority areas associated with the University Strategy. The stands are shown diagrammatically below (Figure 02).

Figure 02: Framework Elements

Each of the elements are designed to ensure that programmes are developed which promote inclusion, student engagement and enable our graduates to make a positive contribution to local communities and the wider world through work, enterprise and engagement. Each of the element are described in detail in the remainder of this document.
Graduate attributes are the skills, knowledge, attitudes and behaviours which all graduates leave University with irrespective of the course or subject they have studied. Graduate attributes are a key component of developing students for employment and they should be embedded throughout the curricula. Such embedding should ensure that programme learning outcomes are developed with graduate attributes in mind and the development of such attributes in students should be assessed within a programme.

As part of developing the curriculum design framework work has been undertaken to review the existing University graduate attributes. First developed in 1996 the existing seven attributes were, on the whole, not well integrated into curriculum design and somewhat unachievable. The existing attributes were:

- Active and agile thinkers, decision makers and implementers
- Collaborators across subject areas and domains
- Leaders in communities
- Supporters of cultural diversity
- Active global citizens
- Digitally literate
- Confident professionals

It is clear that some attributes were multi-faceted with several attributes in one while other attributes were unachievable e.g. everyone who graduates from the University will be a leader in communities.

### University Graduate Attributes

Following widespread consultation including a three-month social media crowd sourcing campaign with students, staff, alumni and employers three new graduate attributes have been developed.

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Links to University value</th>
<th>University of Sunderland graduates...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional</td>
<td>Inspired</td>
<td>display a professional attitude and the behaviours, skills and knowledge to make a positive contribution to society through work, research and community engagement</td>
</tr>
</tbody>
</table>
Adaptable | Innovative | are adaptable to change have resilience and are personally capable of problem solving and innovation

| Engaged | Collaborative | are united by a desire to give something back to society and to develop communities locally, regionally and globally.

In revising the graduate attributes, we wanted to create a smaller number of attributes which were in keeping with the values of the University.

**How do the Graduate Attributes fit the Curriculum Design?**

The graduate attributes should be incorporated into the curriculum at all levels. Programme learning outcomes should clearly demonstrate that the student will leave with the attributes which are generic to all graduates alongside those which are discipline specific. This in turn will require the graduate attributes to be addressed in modules via teaching, learning and assessment strategies. The graduate attributes should exist as a “golden” thread which runs through the curriculum.
Employability in higher education is often regarded as meaning one of three things, these are:

1. Employability in terms of a graduate getting a job
2. Employability in terms of the student being developed by his / her experience of higher education (through both curricula and extra curricula processes)
3. Employability in terms of the possession of relevant achievements and / or potential

The Higher Education Academy (2006) defined employability as “a set of achievements – skills, understandings and practical attributes – that makes a graduate more likely to gain employment and be successful in their chosen occupation, which benefits themselves, the workforce, the community and the economy”.

While higher education, as a sector, often measures graduate employment it is widely acknowledged that employability, in terms of the curricula and extra curricula focus, should be more about a graduate being able to function in a job rather than find a graduate role within a given timescale (Linke, 1991). Dacre Pool and Sewell (2007) describe how employability encompasses employability assets e.g. knowledge, skills and other attributes, deployment career management skills and presentation or job getting skills. As such the promoting employability element is linked to graduate attributes and discipline specific outcomes from programmes all of which should aim to develop a graduate’s employability.

Whilst, recognising that a curriculum should promote employability it is important to acknowledge that single interventions within a curriculum may not be sufficient to develop the social, cognitive and practical skills necessary for work. Therefore, employability must be embedded through the curriculum with linked stages and activities designed to build the core and transferable skills necessary for future work.

The Dearing Report (1997) identified the core graduate skills necessary to promote employability, these are:

- Communication skills;
- Numeracy skills;
- Digital skills and;
- Learning how to learn.

Alongside these core skills sits a set of transferable skills often related to disciplines but which can be applied in a variety of different situations, these include:

- Problem solving;
When embedding employability into a curriculum the Career EDGE model provides a useful framework to consider the various aspects of the approach (See Figure 03). Career EDGE is a clear framework for employability development that is useful for academic staff, career staff and others involved in employability activities (Dacre, pool and Sewell (2007).

The Career EDGE model has several layers. The EDGE elements are in the bottom layer and these represent subject and generic skills, experiences and individual abilities which are essential for future employment.

**Career Development Learning**: this involves helping student to acquire the knowledge, concepts, skills and attitudes which will equipment them to manage their careers.

**Experience (Work and Life)**: this involves providing work experience and identifying the life experiences which may make the individual more employable. This may include, but is not limited to, team working, organisational skills, communication skills etc. in a volunteer or paid work context.

**Degree subject knowledge, skills and understanding**: this is the discipline specific knowledge, skills and experience provided as part of the University course.

**Generic skills (including enterprise)**: this includes skills related to problem solving, team working, digital literacy and enterprise skills such as creativity and innovation.

**Emotional intelligence**: emotional Intelligence ability is concerned with how people perceive, understand and manage emotion; a graduate who is unable to pay attention to their own and others feelings, understand those feelings and manage them effectively is likely to experience difficulties in their personal relationships and their professional relationships with colleagues, managers and customers.

The next layer of the model concerns building **self-efficacy**, **self-esteem** and **confidence** through a process of **reflection and evaluation**.
Figure 03: The Career EDGE Model
Student engagement is widely recognised as an important influence on achievement and learning in higher education (Kahu, 2013). Engaged student learning is defined as the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education (Glossary of Education Reform, 2016).

The engaged student learning element of the framework relates to how programmes are delivered in terms of learning, teaching and assessment. Student engagement in learning requires learning to be active rather than students sitting passively in lectures receiving information. Active learning enables students to deepen their learning of a topic than they would by listening to a lecture of reading a book or other materials. Active learning has benefits for staff as well as it allows them opportunities to interact with students, receive feedback and check levels of understanding.

Active learning is an approach rather than a fixed set of activities. At a basic level, teachers should aim to mix activities to ensure that students are actively engaged in learning at various points in a lesson. This does not mean that there is no place for traditional lectures but rather that such approaches should be mixed with other activities where students interact with the material, each other and the teacher.

Active learning can be used within traditional methods of teaching by incorporating the use of technology. Audience response systems or online polling / quizzes can make lectures more interactive. While flipped approaches can be used to deliver lecture material via video which students watch at their leisure prior to a related interactive seminar or workshop.

Different disciplines use different signature pedagogies including problem, case and team-based learning, simulation, creative approaches, object-based learning etc. Ideally, these approaches should be supported by other methods of learning to ensure that student’s experience a variety of different approaches to teaching and learning. This approach would be in keeping with the principle of multiple means of representation highlighted in the section on Universal Design for Learning.

**How does Engaged Student Learning fit with Curriculum Design?**

Programme teams are required to consider how they will engage students in learning and describe the approach in the programme specification under the learning and teaching strategy and the assessment strategy respectively.
Universal Design for Learning (UDL) Principles will be embedded into all of our curricula. UDL Principles aim to help all students learn by recognising that each personal has their own learning needs and styles. UDL Principles in Higher Education originate from Universal Design thinking. Such an approach recognises that when a designer designs a product if it often created for the “average user”. Universal design is a process by which products are designed to be usable by all people to the greatest extent possible without the need for adaption (The Centre for Universal Design, 1996).

What does this mean for our courses?

Well simply substitute the work product for course. Our courses need to be designed to make them usable by everyone, to the greatest possible extent. Adoption of UDL principles recognises that people learn in different ways and express what they have learnt in different ways. Therefore, some students may like to revise for and complete an examination, while others may prefer presentations.

UDL principles strive to make educational products and surroundings welcoming, accessible and usable by everyone. As such UDL principles put high value on both diversity and inclusiveness.

Principle 1: Multiple means of representation

This principle recognises that students differ in how they perceive and comprehend information and new knowledge. The focus is on:

- teaching methods and techniques;
- making connections;
- presenting ideas;
- modelling enquiry.

This principle acknowledges that there is no single best way to present information or transfer knowledge and that introducing variety in the way in which materials are presented is the key.

Principle 2: Multiple means of expression

This principle recognises that students differ in how they express what they know or have learnt. The focus is on:

- multiple means of assessment within a programme;
• assessment choice;
• scaffolding and supporting students to develop assessment literacy;
• focused timely and forward-looking feedback.

This principle acknowledges that some students perform better in certain types of assessment than others and that introducing choice or variety is the key to developing a course using UDL principles.

**Principle 3: Multiple means of engagement**

This principle recognises that people engage in learning, and therefore learn, through different means. The focus is on:

• variety of engagement methods as part of learning;
• making reading and materials available in advance of taught sessions;
• mixing individual, group and peer learning;
• developing interactive elements.

This principle acknowledges that students learn best when they are engaged. This principle fits with the engaged student learning element within the curriculum framework.

In summary, UDL is about ensuring programmes have:

• Multiple delivery methods which motivate and engage learners in active learning
• Examples which appeal to students from different backgrounds, countries and cultures
• Regular accessible and effective interactions between the student and the teacher
• A firm statement about class outlines, reading and notes being available in advance of taught sessions, seminars and workshops
• A system where taught materials can be revisited including via lecture materials being made available on the Virtual Learning Environment and where appropriate reVIEW session recording via screencast
• A plan to develop assessment literacy by providing iterative feedback on work as it is developed
• An assessment strategy which has a variety of assessment techniques and a mix of high and low stakes assessment
The University of Sunderland is committed to a curriculum that is research-active. We define this as a curriculum that:

- Engages our learners throughout their programme of study, from first entry, as active participants in enquiry, research and knowledge utilisation relevant to their discipline(s) and/or professional practice.

- Equips learners to be confident thinkers and problem solvers who have an understanding of the processes by which knowledge is produced, an ability to identify the current boundaries in their subject field, and are motivated to produce new knowledge and understanding through enquiry, critique and synthesis.

- Is informed at all levels by current and emerging developments in research and professional practice in the discipline.

- Is supported by the professional expertise of staff, and by the University’s research and consultancy activities.

- Is designed to provide opportunities for students to engage in research activities and to meet University research teams during their studies.

**Curriculum Development**

Ensuring that there are links between the University’s research activity and its taught programmes is a key element of both the Research & Innovation Strategy and the Student Success Strategy. This element of the curriculum model is designed to ensure that our programmes make explicit links to research, utilise contemporary pedagogical research in their development and delivery and allow students to interact with University research active staff and teams.

A research-active curriculum may be based on pedagogical processes whereby students are encouraged to operate as ‘junior researchers’ in the way in which they approach their learning (even if they are not producing original research) or it may focus on solving problems through enquiry and using research or helping students understand issues in current research. All three elements may be engaged across the stages and modules of a programme. This dynamic was articulated by Mick Healey in 2005 as follows:
Various pedagogical approaches lend themselves to achieving a research active curriculum including problem-based learning, research methods teaching and seminars focused on the review, critique and utilisation of evidence. At the same time teaching staff are in a strong position to share contemporary research with students and all students should have an opportunity to participate in the activities of the University’s Research Institutes by attending seminars and talking to researchers. Figure 03 illustrates various approaches to engaging students in the research work of a University (Tong et al, 2018). The areas inside the boxes are those approaches which are frequently used and the approaches in ovals are less commonly seen within a curriculum.

A research active curriculum may also be built on using pedagogical research to inform our approaches to student learning, teaching and assessment. The University of Sunderland has a strong track record in pedagogical research in higher education and many of the approaches which have been developed and evaluated are already embedded into our programmes.

Figure 03: Approaches to engaging students in research communities

Sources of help and advice

Academic Registry – Quality Team

The Quality Team in Academic Registry can advise on programme review and approval processes, documentation requirements and other issues related to programme approval and amendment.

The Centre for the Enhancement of Learning & Teaching (CELT)

CELT can provide individual or team-based support for curriculum design. This includes advice about meeting the requirements of each of the Framework’s elements. CELT runs a range of continuing professional development sessions and team-based assessment labs to assist staff to develop innovative approaches to teaching, learning and assessment.

Teaching and Learning Support in Faculties

A number of Faculties have Principal Lecturers, Associate Professors and / or Professors of Professional Practice in Learning and Teaching who can assist teams to develop innovative approaches to teaching, student support and assessment.

Guides

A range of guides related to signature pedagogies, enhancing research opportunities for students and technology enhanced learning.
References


