



**TUS**

TECHNOLOGICAL UNIVERSITY OF THE  
SHANNON: MIDLANDS MIDWEST  
OLLSCOIL TEICNEOLAÍOCHTA NA  
SIONAINNE: LÁR TÍRE IARTHAR LÁIR



QQI AWARD

## DIPLOMA SUPPLEMENT

This Diploma Supplement follows the model developed by the European Commission, Council of Europe and UNESCO/CEPES. The purpose of the supplement is to provide sufficient independent data to improve the international 'transparency' and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgements, equivalence statements or suggestions about recognition.

### 1 INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

#### 1.1 Surname:

Bester

#### 1.2 First Name(s):

Paul

#### 1.3 Date of birth (day/month/year):

08 February 1973

#### 1.4 Student identification number or code (if available):

A00291568

### 2 INFORMATION IDENTIFYING THE QUALIFICATION

#### 2.1 Name of qualification and (if applicable) title conferred:

Master of Science in Software Design with Cloud Native Computing

#### 2.2 Main field(s) of study for the qualification:

#### 2.3 Name and status of awarding institution (in original language):

Technological University of the Shannon: Midlands Midwest (www.tus.ie) is an autonomous state institution, established in 2021 as a designating awarding body, and linked with QQI (formerly known as Athlone Institute of Technology accredited by QQI).

#### 2.4 Name and status of institution (if different from 2.3) administering studies (in original language):

#### 2.5 Language(s) of instruction/examination:

English

### 3 INFORMATION ON THE LEVEL OF THE QUALIFICATION

#### 3.1 National Framework of Qualifications level and award-type:

Masters Degree. One year in full-time mode.

#### 3.2 Official length of programme:

In full-time mode 1 year (90 ECTS Credits). In part-time mode, 90 credits may be accumulated over several years.

#### 3.3 Access Requirement(s):

Honours Bachelor Degree (or equivalent); further details www.tus.ie

### 4 INFORMATION ON THE CONTENTS AND RESULTS GAINED

#### 4.1 Mode of Study:

Part-Time

#### 4.2 Programme Requirements:

Learner must satisfy programme requirements as prescribed in the Approved Course Schedule and the Marks and Standards of the Institute; subject pass mark is generally 40%; further details www.tus.ie

#### 4.3 Please see last page

#### 4.4 Grading Scheme and, if available, grade distribution guidance:

At Least 70%	First Class Honours
At Least 60%	Second Class Honours
At Least 40%	Pass
The overall average is based on a credit-weighted performance in the award stage examination or on a weighted combination of the overall performance in more than two stages.	


#### 4.5 Overall classification of the qualification (in original language):

Second Class Honours

### 5 INFORMATION ON THE FUNCTION OF THE QUALIFICATION

#### 5.1 Access to further study:

Programme may entitle access to postgraduate study.

#### 5.2 Professional status (if applicable):

### 6 ADDITIONAL INFORMATION

#### 6.1 Additional information:

Award Conferred 01-NOV-22

#### 6.2 Further information sources:

www.tus.ie

4.3 Programme details (e.g. modules or units studied), and the individual grades/marks/credits obtained:

\* Marks out of 100%; Pass marks generally 40%. A mark with a P appended, e.g. 35P, indicates that the subject was passed by compensation.

\*\* The ECTS Grade is a relative grading indicating the learner's performance within the cohort;  
A top 10%; B next 25%; C next 30%; D next 25%; E next 10%.

CODE	SUBJECT	STAGE	MARKS*	ECTS CREDITS	ECTS GRADE**
RES 09038	Research Methods & Professional Practice	1	79	10	
RES 09039	Engineering Team Project	1	83	10	
RES 09040	Work Placement & Professional Practice	1	PS	30	
SCRP 09001	Applied Scripting Languages	1	59	5	
SFTW 09053	Microservices Architecture.	1	53	10	
SFTW 09055	Object Oriented Programming I	1	61	5	
SFTW 09057	Object Oriented Programming II	1	40	5	
SFTW 09060	Continuous Build and Delivery	1	54	5	
SFTW 09061	Container Design and Deployment	1	71	10	

**Award Grade Point Average**

**65.5%**

## 7 CERTIFICATION OF THE SUPPLEMENT

7.1 Date

7.2 Signature

7.3 Capacity

7.4 Official stamp or seal

13 February 2023



Professor Vincent  
Cunnane,  
President



## Section 8

# DESCRIPTION OF HIGHER EDUCATION AND TRAINING SYSTEM IN IRELAND

As at May 2019

The Irish system of higher education and training comprises a range of higher education institutions. Universities (including linked colleges and colleges of education), Technological Universities, and the Royal College of Surgeons of Ireland (RCSI) are each established in law as autonomous designated awarding bodies. Institutes of Technology make their awards under delegated authority from Quality Qualifications Ireland (QQI). A range of private and other education and training institutions also deliver programmes leading to QQI awards. A list of higher education institutions is available at [www.QQI.ie](http://www.QQI.ie).

### Government Agencies

While overall responsibility for the education and training system lies with the Department of Further and Higher Education, Research, Innovation and Science ([www.education.ie](http://www.education.ie)), there are several state agencies with responsibility for specific functions in higher education. The Higher Education Authority ([www.heai.ie](http://www.heai.ie)) is responsible for furthering the development and assisting in the co-ordination of State investment in higher education and training, including research and international education. Quality and Qualifications Ireland (QQI) ([www.qqi.ie](http://www.qqi.ie)) is responsible for the National Framework of Qualifications (NFQ) and for the external quality assurance of further and higher education and training (including English language provision).

### The National Framework of Qualifications (NFQ)

The types and expected learning outcomes of national awards made by higher education institutions at undergraduate and postgraduate level are described in the National Framework of Qualifications (NFQ). The Framework has ten levels, which include awards made by schools, further and higher education and training institutions. Awards in the NFQ are nationally and internationally recognised and are underpinned by legislative quality assurance arrangements. There are overarching level indicators at each of the 10 levels of the Framework with associated sub-strands of knowledge, skill and competence appropriate to the achievement of an award at each of these levels. The NFQ is aligned with the Bologna Framework (Framework for Qualifications of the European Higher Education Area) and is referenced to the European Qualifications Framework for Lifelong Learning (EQF).

### Higher Education and Training Awards

There are two overall groups of classes of awards in the NFQ: Major and Non-Major. Major awards are the principal class of awards made at each level. They have a larger volume and breadth associated with them than non-major awards. There are sixteen Major award-types included across the ten levels of the Framework including eight higher education and training award-types which are made from levels 6 - 10. There are three classes of Non-Major award: minor, special purpose and supplemental. Non-major award types facilitate the provision of a wide range and variety of programmes. The volume associated with higher education and training awards is expressed in terms of the allocation of European Credit Transfer and Accumulation System (ECTS) compatible credit.

Access to initial higher education and training is largely on a competitive basis following successful completion of the Leaving Certificate examinations. Access may also be gained through a range of alternative progression mechanisms, including those for mature entrants (23 years of age +); for holders of further education and training awards; or through the recognition of prior learning.

### Each Major Higher education and training award is described below:

#### Higher Certificate (NFQ Level 6/ EQF Level 5)

The Higher Certificate is normally awarded after completion of a programme of two years duration (120 ECTS credits). Entry to these programmes is generally for school leavers and those with equivalent qualifications. The Higher Certificate is an intermediate qualification within the Bologna First Cycle.

#### Ordinary Bachelor Degree (NFQ Level 7/ EQF Level 6)

The Ordinary Bachelor Degree is normally awarded after completion of a programme of three years duration (180 ECTS credits). Entry to a programme leading to an Ordinary Bachelor degree is typically for school leavers and those with equivalent qualifications. In addition, there are transfer arrangements in place across higher education and a number of programmes of one year duration leading to the Ordinary Bachelor Degree for holders of the Higher Certificate. The Ordinary Bachelor Degree is compatible with the Bologna First Cycle descriptor, though holders of this award do not generally immediately access programmes leading to Second Cycle awards in Ireland.

#### Honours Bachelor Degree (NFQ Level 8/ EQF Level 6)

The Honours Bachelor Degree is normally awarded following completion of a programme of three to four years duration (180-240 ECTS credits), although there are examples of longer programmes in areas such as architecture, dentistry and medicine. Entry is generally for school leavers and those with equivalent qualifications. In addition, there are transfer arrangements across higher education, and a number of programmes of one year duration leading to Honours Bachelor Degrees for holders of the Ordinary Bachelor Degree. The Honours Bachelor Degree is a Bologna First Cycle qualification.

#### Higher Diploma (NFQ Level 8/ EQF Level 6)

The Higher Diploma is normally awarded following completion of a programme of one year duration (60 ECTS credits). Entry to a programme leading to a Higher Diploma is typically for holders of Honours Bachelor Degrees but can also be for holders of Ordinary Bachelor Degrees. It is of note that the Higher Diploma is typically in a different field of learning than the initial award. The Higher Diploma is a qualification at the same level as completion of the Bologna First Cycle.

### Masters Degree (NFQ Level 9/ EQF Level 7)

There are two types of Masters Degree in Ireland: taught Masters Degrees and research Masters Degrees. The taught Masters Degree is awarded following the completion of a programme of one to two years duration (60-120 ECTS credits). Entry to a programme leading to a taught Masters Degree is typically for holders of Honours Bachelor Degrees. In some cases, entry to such programmes can be permitted for those with Ordinary Bachelor Degrees or equivalent. Research Masters Degree programmes are typically of two years duration (120 ECTS credits) though not all such programmes are credit rated. The Irish Masters Degree is compatible with completion of the Bologna Second Cycle.

### Post Graduate Diploma (NFQ Level 9/ EQF Level 7)

The Postgraduate Diploma is normally awarded following completion of a programme of one year duration (60 ECTS credits). Entry to a programme leading to a Postgraduate Diploma is typically for holders of Honours Bachelor Degrees but can also be for holders of Ordinary Bachelor Degrees. The Post-graduate Diploma is an intermediate qualification within the Bologna Second Cycle.

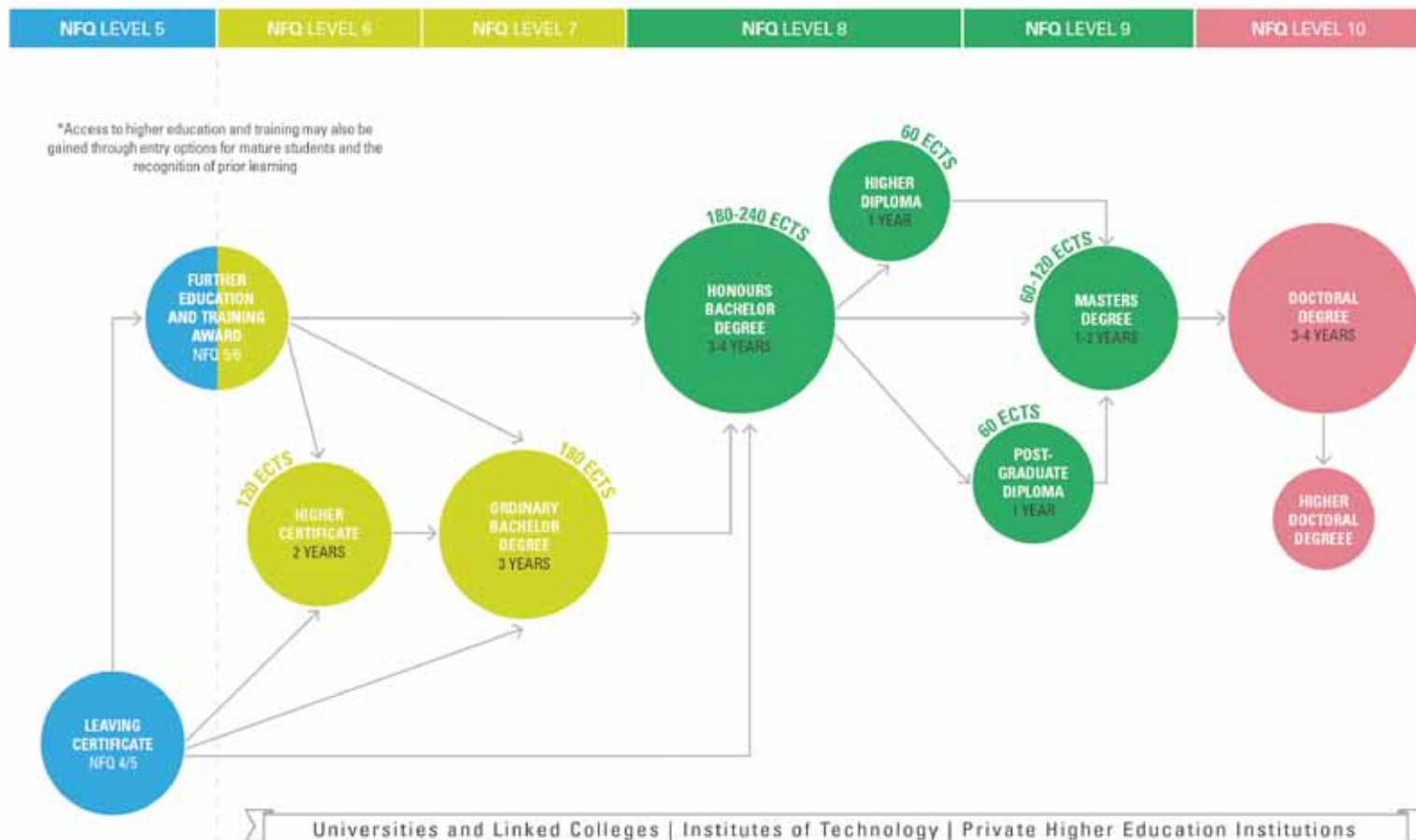
### Doctoral Degree (NFQ Level 10/ EQF Level 8)

Possession of an Honours Bachelor Degree is normally required for entry to a doctoral programme. In some disciplines, a Masters Degree is also preferred. Normally those entering a doctoral programme with an Honours Bachelor Degree initially register for a research Masters Degree or provisional doctoral candidature. Upon successful completion of this initial stage, the candidate acquires full doctoral candidature. Doctoral programmes are between three and four years in duration. ECTS credits are used in doctoral programmes for taught elements only. Varying doctoral programmes now exist, including professional and performance/ practice based doctorates. The Irish Doctoral Degree is compatible with completion of the Bologna Third Cycle.

### Higher Doctorate (NFQ Level 10/ EQF Level 8)

This award largely recognises excellent and distinguished contributions to learning. It may be used for career progression to advanced levels of academia and research. This award is never based on a provider's programme and, as such, is not subject to validation but is assessed by the awarding body for each individual provider. Normally, the learner already holds a first doctorate or equivalent for some period of time prior to becoming a candidate for the higher doctorate. The Irish Higher Doctorate is compatible with completion of the Bologna Third Cycle.

## HIGHER EDUCATION AND TRAINING SYSTEM



EQF Level	EHEA Framework (Bologna)	National Framework of Qualifications (NFQ) Level	NFQ Major Award-Types
EQF Level 1		NFQ Level 1 NFQ Level 2	Level 1 Certificate Level 2 Certificate
EQF Level 2		NFQ Level 3	Level 3 Certificate; Junior Certificate
EQF Level 3		NFQ Level 4	Level 4 Certificate; Leaving Certificate
EQF Level 4		NFQ Level 5	Level 5 Certificate; Leaving Certificate
EQF Level 5	Short Cycle within First Cycle	NFQ Level 6	Advanced Certificate Higher Certificate
EQF Level 6	First Cycle	NFQ Level 7  NFQ Level 8	Ordinary Bachelor Degree Honours Bachelor Degree; Higher Diploma
EQF Level 7	Second Cycle	NFQ Level 9	Masters Degree; Post-Graduate Diploma
EQF Level 8	Third Cycle	NFQ Level 10	Doctoral Degree; Higher Doctorate

### Further Information:

The National Framework of Qualifications (NFQ):  
[www.nfq.ie](http://www.nfq.ie)

National Framework of Qualifications – Grid of Level Indicators:  
<http://www.nfq.ie/nfq/en/documents/NFQLevelIndicators.pdf>

Eurydice – Eurypedia:  
The European Encyclopedia on National Education Systems:  
[http://eacea.ec.europa.eu/education/eurydice/eurypedia\\_en.php](http://eacea.ec.europa.eu/education/eurydice/eurypedia_en.php)

National Europass Centre (NEC) for Ireland:  
[www.europass.ie](http://www.europass.ie)

European Credit Transfer and Accumulation System (ECTS):  
[http://ec.europa.eu/education/tools/ects\\_en.htm](http://ec.europa.eu/education/tools/ects_en.htm)

EQF Portal: [http://ec.europa.eu/eqf/compare\\_en.htm](http://ec.europa.eu/eqf/compare_en.htm)  
Ireland – Bologna Process:  
<http://www.eurireland.ie/programmes/bologna-process.128.html>

Information on the Irish National Higher Education and Training System is provided by the Irish National Academic Recognition Information Centre (NARIC), located at the offices of the Quality and Qualifications Ireland (QQI), and can be contacted via the QQI website:  
[www.qqi.ie](http://www.qqi.ie)