



Programme Specification

Programme title: Certificate in Innovation, Enterprise and Circular Economy

Academic Year:	2018/19
Degree Awarding Body:	University of Bradford
Partner(s), delivery organisation or support provider (if appropriate):	
Final and interim award(s):	[Framework for Higher Education Qualifications (FHEQ) level 7] Postgraduate Certificate
Programme accredited by (if appropriate):	AACSB and EQUIS
Programme duration:	Distance learning: 12 months
QAA Subject benchmark statement(s):	Business and Management (2015)
Date of Senate Approval:	April 2013
Date last confirmed and/or minor modification approved by Faculty Board	June 2018

Introduction

In accordance with the University’s mission ‘Making Knowledge Work’, the School of Management aims to provide programmes that educate individuals as managers and business specialists, and thereby improve the quality of management as a profession.

Short and long term rising commodity prices, structural adjustments and declining quality of resources are presenting major strategic and operational challenges to companies, countries and geo-regions. Shifts in economic geography, instability in financial markets and volatility in access to and security of supply, raise the risks of resource conflicts and social upheaval. Such issues will likely impact more widely on fundamental societal needs for food, water and affordable energy and fuel. All these drivers and trends point to the need to re-think supply chain design, assessment of risk and security and business models. The Certificate has been developed to support our academic programme with the Ellen MacArthur Foundation (EMF).

A working definition of the circular economy is:

‘A framework for re-thinking our industrial economy that is, by design or intention, restorative and in which materials flows are of two types: biological nutrients,

designed to re-enter the biosphere safely, and technical nutrients, which are designed to circulate at high quality without entering the biosphere'¹. ‘

Closed substance cycles, sometimes referred to as closed loop systems feature prominently in discussions around circular economy. The term ‘closed loop’ is then also often linked and associated with a further term – ‘industrial ecology’ – which features a number of characteristics that appear in the circular economy framework.

Closed loop principles are well founded in engineering under the idea of closed loop systems and ecology (operating with feedback systems). These principles involve a careful management of materials flows, which in the circular economy are of two types as described by McDonough and Braungart (*Cradle to Cradle, Re-making the way we make things*): *biological nutrients*, designed to re-enter the biosphere safely and build natural capital, and *technical nutrients*, which are designed to circulate at high quality without entering the biosphere. Earlier studies used terms such as *economy in loops* referring to product life extension, durability, remanufacture and product service substitution to reduce the material intensity of the economy as well as create virtuous material – economy cycles.

The term *industrial ecology* also has a number of features of closed loop and cascading principles and itself is often associated with a number of other terms such as *clean technology*, *design for environment* and *industrial symbiosis*. At its heart it refers to industrial eco-systems with inputs and outputs from different processes, and facilities and activities becoming connected or evolving over time to the benefit of all in the network. At the firm or facility level, methods and techniques such as Cleaner Production, Design for Environment, Life Cycle Assessment, Environmental Management Systems highlight significant resource savings that could be achieved from focussed and structured analysis of material and resource inputs and outputs. Industrial symbiosis takes this activity to another level, connecting groups of firms, processes and businesses who can benefit by using each other’s wastes or outputs. Projects such as the famous Kalundborg eco-park in Denmark, have provided a blue print for many such schemes in China.

Some of the practical implications of a circular economy are a shift from selling goods/products to selling performance, moving towards renewable energy, rethinking value cycles and supply chains and recognising the value of diversity and whole system design. Innovation and enterprise lies at the heart of the circular economy – harnessing new ideas, modernising old ideas and shifting from a throughput model to circular models for value creation, retention and recovery,

A student taking the PGC award can transfer to the MBA upon successful completion of the award or during the award, assuming satisfactory academic progression (decided by the Director of Studies). Note that entry requirements for the PGC are the same as for the MBA

Distance learning

The programme is designed to be fully on-line with all materials in downloadable format. Students will receive dedicated DL tutor support, online tutor discussions and online live tutorials. There are two intakes each year to this programme.

¹ Source: Ellen Macarthur Foundation

Programme Aims

The programme is intended to:

- develop management professionals equipped with the knowledge, skills and expertise to provide the strategic leadership necessary to effect the innovation, enterprise and transformational change for a circular economy
- Prepare their business and organisation for the transition to a circular economy;
- Deepen their understanding of key concepts, principles and business applications of a circular economy framework;
- Identify, test and evaluate ideas, innovation and enterprising solutions around the circular economy within mainstream business and management setting;
- Extend and develop their networks to develop in-depth discussion and updating on complex issues associated with the implementation of the circular economy

Programme Learning Outcomes

To be eligible for the award of Postgraduate Certificate at FHEQ level 7, students will be able to:

- LO1 Demonstrate a systemic and critical understanding of management knowledge and awareness of contemporary business issues, and current research and practice in business administration
- LO2 Demonstrate a broad but rigorous understanding of the concepts, constructs and frameworks applicable to business administration and of the tools and techniques used to support decision making
- LO3 Critically appraise current research and advanced scholarship in management to support the formulation of solutions to contemporary business problems
- LO4 Exercise personal initiative and responsibility in effecting solutions to complex strategic business problems surrounding by uncertain business intelligence and incomplete data
- LO5 Evidence adaptability and originality in tackling and solving problems, and the ability to work cooperatively with others and provide ethical leadership in bringing about strategic transformational change

Curriculum

Postgraduate Certificate

FHEQ Level	Module Title		Credits	Module Code
7	Competitiveness through Technology and Innovation	Core	20	OIM7030-B
7	Materials, Resources, Energy and Competitiveness	Core	10	OIM7019-A

7	Business Models for a Circular Economy	Core	10	OIM7020-A
7	Diversity, Scale and Development	Core	10	OIM7021-A
7	Enterprise and Innovation	Core	10	EAE7005-A

The programme commences with the module Competitiveness through Technology and Innovation. This contains the threshold concepts and essential frameworks that are required for the further four modules that then build upon these ideas. The curriculum may change, subject to the University's programme approval, monitoring and review procedures

Students will be eligible to exit with the award of Postgraduate Certificate if they have successfully completed 60 credits and achieved the award learning outcomes.

Learning and Teaching Strategy

The programme aims to integrate applied and theoretical knowledge with assessment processes that test knowledge, application and analysis of the disciplines. Each module involves a balance between individual and collaborative learning, both of which requires the student to be highly motivated and willing to develop understanding through self-directed and peer to peer study. To facilitate this and ensure that maximum benefit is derived from this mode of study a number of teaching methods will be used to support their studies:

- The provision of a detailed interactive study book made up of 8 learning units and 1 revision/overview unit introducing key areas and guiding them through additional materials (e.g. relevant materials, information on the VLE)
- The provision of relevant set materials and additional practitioner based and academic literature
- Complete online lecture audio, selected lecture videos and presentation slides (selected modules)
- Module leader 'talking heads' introducing and concluding each module
- Test Yourself questions for each module learning unit
- Dedicated DL tutor support
- Online tutor discussion forums
- On line live tutorials with a dedicated module tutor using case studies to further develop understanding of key issues

In addition to the assessed components of the programme, there are a number of skills-based non-assessed programmes available to students. These are delivered by attendance at Bradford or via live online workshops. These programmes are supported by online materials.

Assessment Strategy

The DL PGC in Innovation, Enterprise and the Circular Economy is assessed by assignment. In addition there are formative assessments that allow students to develop their ideas and confidence with the subject matter. Assessment is integrated with learning and teaching to support and demonstrate achievement of the learning outcomes for individual modules and the programme as a whole. Emphasis is placed on the feedback function of formative assessment as part of the learning, teaching and assessment strategy as a whole.

Assessment Regulations

This Programme conforms to the standard University Regulations which are available at the following link:

<http://www.bradford.ac.uk/aqpo/ordinances-and-regulations/>

Admission Requirements

The University welcomes applications from all potential students and most important in the decision to offer a place is our assessment of a candidate's potential to benefit from their studies and of their ability to succeed on this particular programme. Consideration of applications will be based on a combination of formal academic qualifications and other relevant experience.

The standard entry requirements for the programme are as follows:

An acceptable profile of an applicant with formal academic qualifications would be:

At least 3 years postgraduate work experience including experience in a supervisory, managerial or business capacity; evidence of numeracy and literacy competences, e.g. a satisfactory GMAT², which is valid for the year of entry; a good first degree or equivalent overseas qualification from a recognised institution, and; an approved test in English, if English is not the applicant's first language.

An acceptable profile of an applicant with recognised professional qualifications would be:

At least 5 years work experience in a professional capacity, post qualification; evidence of numeracy and literacy competences, e.g. a satisfactory GMAT, which is valid for the year of entry, and; an approved test in English, if English is not the applicant's first language.

An acceptable profile of an applicant without formal academic or professional qualifications would be:

Significant managerial or business leadership experience (normally 8 years); evidence of numeracy and literacy competences, e.g. a satisfactory GMAT, which is valid for the year of entry; an academic recommendation based on a one-to-one Interview, and; an approved test in English, if English is not the applicant's first language.

As the programme is delivered entirely in English, applicants must be able to demonstrate proficiency in the English language thus, UK educated students must have a GCSE grade 4 (C) or above. Non-native speakers must have a 6.5 score on IELTS test of English, 94 in the internet-based TOEFL or a score of 60 or more in the Pearson English Test – exceptionally, holders of a degree from a native English speaking country (as defined on the University central admissions database) awarded within 5 years prior to entry to the Bradford programme may be exempt from these English test requirements, subject to the provision of an employer's letter indicating the communication medium used in the workplace is English. Alternatively, English capabilities may also be assessed through the provision of a portfolio of evidence as outlined in the Bradford English Matrices.

² The nominal score varies between countries. Consequentially, all applications are individually assessed against national norms.

Applicants may be invited to take an online numeracy and literacy test and to discuss their application with a member of the Bradford admissions team. Test results, references, and the overall quality of an applicant's profile will determine whether an offer of a place is made.

The University of Bradford has always welcomed applications from people with disabilities, and these will be considered on the same academic grounds as are applied to all applicants. All students are expected to have access to appropriate personal computing facilities. Adequate Internet connectivity is essential.

Applications are welcome from students with non-standard qualifications or mature students (those over 21 years of age on entry) with significant relevant experience.

Recognition of Prior Learning

If applicants have prior certificated learning or professional experience which may be equivalent to parts of this programme, the University has procedures to evaluate and recognise this learning in order to provide applicants with exemptions from specified modules or parts of the programme.

Minor Modification Schedule

Version Number	Brief description of Modification	Date of Approval (Faculty Board)
1		
2		