

University of the West of Scotland

Module Descriptor

Session: 2022/23

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Title of Module: Enterprise Skills for Biologists 20

Code: BIOL08023	SCQF Level: 8 (Scottish Credit and Qualifications Framework)	Credit Points: 20	ECTS: 10 (European Credit Transfer Scheme)
School:	School of Health and Life Sciences		
Module Co-ordinator:	Steven Kelly		

Summary of Module

This module is designed to introduce skills frequently identified by employers as desirable traits in modern bioscience graduates.

Students will work in small teams to develop a biotechnology/bioscience product or service to tackle a current scientific or societal issue. Each student will have specific roles in the group in addition to recording their own reflections on the team's journey to develop the business idea.

The team will carry out research to identify potential business ideas in the bioscience sector including identifying examples of current research in that area. Students will also be asked to consider business aspects such as patentability of the idea, likely competitors and possible challenges or risks in that sector. Creative aspects such as product name and logo design will also be included.

At the end of the module each team will pitch their idea to their peers and lecturers using a multimedia approach of their choice e.g. PowerPoint, video, audio, leaflets.

Each student will maintain a reflective log (e.g. blog, audio journal, video journal, podcast) to capture their thinking, challenges and problem solving during all scientific and creative aspects of the process.

This module will work to develop a number of the key "I am UWS" Graduate Attributes to make those who complete the module (e.g.) Universal Work Ready Successful. These will include students who complete the module being; Analytical, Inquiring, Digitally literate, Autonomous, Problem-solver, Ethically-minded, Effective Communicator, Creative, Imaginative, Socially Responsible, Collaborative, Enterprising and Driven.

Module Delivery Method

Face-To-Face	Blended	Fully Online	HybridC	HybridO	Work-based Learning
	✓				

Face-To-Face

Term used to describe the traditional classroom environment where the students and the lecturer meet synchronously in the same room for the whole provision.

Blended

A mode of delivery of a module or a programme that involves online and face-to-face delivery of learning, teaching and assessment activities, student support and feedback. A programme may be considered "blended" if it includes a combination of face-to-face, online and blended modules. If an online programme has any compulsory face-to-face and campus elements it must be described as blended with clearly articulated delivery information to manage student expectations

Fully Online

Instruction that is solely delivered by web-based or internet-based technologies. This term is used to describe the previously used terms distance learning and e learning.

HybridC

Online with mandatory face-to-face learning on Campus

HybridO

Online with optional face-to-face learning on Campus

Work-based Learning

Learning activities where the main location for the learning experience is in the workplace.

Campus(es) for Module Delivery

The module will **normally** be offered on the following campuses / or by Distance/Online Learning: (Provided viable student numbers permit)

Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
			✓			

Term(s) for Module Delivery

(Provided viable student numbers permit).

Term 1		Term 2		Term 3	
	✓				

Learning Outcomes: (maximum of 5 statements)

On successful completion of this module the student will be able to:

- L1. L1. Identify and critically evaluate an idea for development in a specific bioscience sector
- L2. L2. Demonstrate understanding of the process of product development in biotechnology
- L3. L3. Demonstrate teamwork to develop and present a bioscience-related product or service
- L4. L4. Critically reflect on the development process

Employability Skills and Personal Development Planning (PDP) Skills

SCQF Headings	During completion of this module, there will be an opportunity to achieve core skills in:
Knowledge and Understanding (K and U)	SCQF Level 8. Demonstrate an understanding of current product requirements in bioscience and biotechnology.
Practice: Applied Knowledge and Understanding	SCQF Level 8. Carry out an investigation into developing bioscience products and/or services.
Generic Cognitive skills	SCQF Level 8. Use a range of approaches to critically evaluate solutions to specific issues in bioscience
Communication, ICT and Numeracy Skills	SCQF Level 8. Present complex information on the product to a range of audiences. Use of range of ICT applications to process and present data.
Autonomy, Accountability and Working with others	SCQF Level 8. Exercise initiative and autonomy in product development. Practice in ways that show awareness of own and others' roles, responsibilities and contributions when carrying out and evaluating the project

Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code:	Module Title:
	Other:	
Co-requisites	Module Code:	Module Title:

* Indicates that module descriptor is not published.

Learning and Teaching	
<p>The module is student-centered with a focus on collaborative workshops to support the development of the team's ideas. Lecturers are present primarily to act as facilitators and to drive the development process forward by engaging with the students' creative and scientific thinking around their project.</p> <p>There is considerable flexibility regarding the format used by students to capture the development process and present their idea to their peers (video, audio, text).</p> <p>The classroom will act as a hub for some centralised activity and feedback sessions but teams are encouraged to work in a range of other locations as appropriate (library, online, coffee shop etc.) to better explore their experience working together as a development team.</p>	
Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	Student Learning Hours (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)
Tutorial/Synchronous Support Activity	24
Asynchronous Class Activity	12
Independent Study	164
	200 Hours Total

****Indicative Resources: (eg. Core text, journals, internet access)**

The following materials form essential underpinning for the module content and ultimately for the learning outcomes:

Matei, F. & Zirra, D (2019) Introduction to Biotech Entrepreneurship: From Idea to Business. Springer

Shimasaki C.(2014) Biotechnology Entrepreneurship: Starting, Managing, and Leading Biotech Companies. Academic Press

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Shimasaki C. (2009) The Business of Bioscience: What goes into making a Biotechnology Product. Springer

(**N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Engagement Requirements

In line with the Academic Engagement Procedure, Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on the relevant learning platform, and complete assessments and submit these on time. Please refer to the Academic Engagement Procedure at the following link: [Academic engagement procedure](#)

Where a module has Professional, Statutory or Regulatory Body requirements these will be listed here: Attendance at synchronous sessions (lectures, workshops and tutorials), completion of asynchronous activities, and submission of assessments to meet the learning outcomes of the module.

Supplemental Information

Programme Board	Biological Sciences and Health
Assessment Results (Pass/Fail)	No
Subject Panel	Biology L7-11
Moderator	Gail McGarvie
External Examiner	A Tsaousis
Accreditation Details	This module is part of the BSc (Hons) Applied Bioscience programme; accredited by Royal Society of Biology (RSB)
Changes/Version Number	1.04 Attendance and equality statements updated.

Assessment: (also refer to Assessment Outcomes Grids below)

Group portfolio on background research and development of specific product or service (including minutes of team meetings) 35%

Group presentation of the biotechnology product/service 30%

Individual reflective report on the process of product development 35%

(N.B. (i) **Assessment Outcomes Grids** for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed.

(ii) An **indicative schedule** listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Handbook.)

Assessment Outcome Grids (Footnote A.)**Component 1**

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Portfolio of written work	✓	✓			35	0

Component 2

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Presentation			✓		30	0

Component 3

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Workbook/ Laboratory notebook/ Diary/				✓	35	0

Training log/ Learning log						
Combined Total For All Components					100%	0 hours

Footnotes

- A. Referred to within Assessment Section above
 B. Identified in the Learning Outcome Section above

Note(s):

1. More than one assessment method can be used to assess individual learning outcomes.
2. Schools are responsible for determining student contact hours. Please refer to University Policy on contact hours (extract contained within section 10 of the Module Descriptor guidance note).
 This will normally be variable across Schools, dependent on Programmes &/or Professional requirements.

Equality and Diversity

In line with current legislation (Equality Act, 2010) and the UWS Equality, Diversity, and Human Rights Code, our modules are accessible and inclusive, with reasonable adjustment for different needs where appropriate. Module materials comply with University guidance on inclusive learning and teaching, and specialist assistive equipment, support provision and adjustment to assessment practice will be made in accordance with UWS policy and regulations. Where modules require practical and/or laboratory based learning or assessment required to meet accrediting body requirements the University will make reasonable adjustment such as adjustable height benches or assistance of a 'buddy' or helper. Please refer to the UWS Equality and Diversity Policy at the following link: [UWS Equality and Diversity Policy](#)

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(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)