

Module Details	
Module Title:	Research Project for Healthcare Science
Module Code:	BIS6016-D
Academic Year:	2019-20
Credit Rating:	40
School:	School of Chemistry and Biosciences
Subject Area:	Biomedical Science
FHEQ Level:	FHEQ Level 6
Pre-requisites:	
Co-requisites:	

Contact Hours	
Type	Hours
Lectures	23
Tutorials	7
Laboratory	160
Directed Study	210

Availability	
Occurrence	Location / Period
BDA	University of Bradford / Academic Year (Sept - May)

Module Aims
This module will provide an opportunity for students to develop research skills in a number of areas including experimental design and execution, data analysis and presentation and critical evaluation of the published literature.

Outline Syllabus
Methods used in Healthcare Science (Life Sciences) research, including PCR, SDS-PAGE, Western blotting, tissue culture and immunohistochemistry; Statistics for Biomedical Scientists, COSHH and biological safety assessments;

Good laboratory practice;
 Ethics in research;
 The Human Tissue Act, drug licensing, intellectual property, patenting;
 Use of the EndNote referencing software, scientific writing, literature searching.

Learning Outcomes

1	Demonstrate a critical understanding of a current research topic in Healthcare Science (Life Sciences) and evaluate approaches used to investigate this topic (HCPC standards 14, 13).
2	Plan & execute a programme of original research (HCPC standards 4, 14).
3	Assess the chemical, biological & ethical aspects of research in accordance with local policy & laboratory safety protocols. (HCPC standards 2, 2.8, 3, 14, 15).
4	Select appropriate statistical techniques for a range of scientific analyses.
5	Conduct appropriate experiments skilfully & demonstrate practical skills appropriate to the project undertaken (HCPC standards 14).
6	Analyse & evaluate the information collected (HCPC standard 14).
7	Perform effective literature searches. Interpret results & discuss these critically in the context of the published literature (HCPC standard 14).
8	Maintain laboratory records appropriately (HCPC standard 10).
9	Clearly convey information or results to the appropriate level of detail.
10	Compile a scientific report that presents data in a clear and effective way using correct biomedical and medical language and terminology (HCPC standard 8).

Learning, Teaching and Assessment Strategy

Lectures, seminars, tutorials and demonstrations will be used to provide relevant information on a variety of aspects associated with preparing for and conducting research, analysing data and carrying out literature searches. Standard laboratory procedures such as PCR, SDS-PAGE, Western blotting, tissue culture and immunohistochemistry will be covered in lectures, as will scientific writing, laboratory Health & Safety, Ethics in research, GLP, IP and patenting. The application of statistical methods, covered in the Workbased Learning and Professional Practice module at stage 2, will be revisited in lectures and computer-based formative tutorials. Drop-in tutorials will also be delivered on the use of the EndNote referencing software.

Each student will be assigned an individual research topic and will be allocated a university academic supervisor. Students will produce COSHH and biological safety forms and a draft Introduction section using feedback from their supervisor before these elements are submitted. Evaluation of experimental design and research strategy will be achieved through the submission of a project proposal portfolio on the topic of the research project for summative assessment. A 4-week, work-based laboratory project will allow the students to demonstrate their practical skills and their ability to design and implement experiments resulting in a work-place supervisor's mark.

Communication skills and understanding will be summatively assessed through a written project report, following draft submission and feedback from the supervisor.

During directed study hours, students are expected to:
undertake reading to consolidate and expand on the content of formal taught sessions;
research and prepare for assessments and undertake specific elements of reading as directed.

Mode of Assessment				
Type	Method	Description	Length	Weighting
Summative	Coursework	Project report	0-5000 words	80%
Summative	Coursework	Preparation of a 'project proposal portfolio' based upon research project topic	0-1000 words	10%
Summative	Clinical Assessment	A report from the workplace supervisor of student's performance in laboratory	0-250 words	10%

Reading List

To access the reading list for this module, please visit <https://bradford.rl.talis.com/index.html>.

Please note:

This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.