

Research Project for Healthcare Science

Module Code:	BIS6016-D
Academic Year:	2018-19
Credit Rating:	40
School:	School of Chemistry and Biosciences
Subject Area:	Biomedical Science
FHEQ Level:	FHEQ Level 6
Module Leader:	Mrs Gillian Jaggar

Additional Tutors:

Mrs Pamela Dunn, Ms Kara Thornton, Dr Wayne Roberts, Dr Munir Hussain

Pre-requisites:**Co-requisites:****Contact Hours**

Type	Hours
Lectures	23
Tutorials	7
Laboratory	160
Directed Study	210

Availability Periods

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.

Module Learning Outcomes

On successful completion of this module, students will be able to...

- 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).
- 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).
- 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.

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 supervisor. Students will produce COSHH and biological safety forms and a draft Introduction section using feedback from their supervisor before these elements are submitted for summative

assessment. Evaluation of experimental design and research strategy will be achieved through the submission of a `Research Portfolio` assignment on the topic of the research project which is summatively assessed. A 4 week, full-time laboratory project will allow the students to demonstrate their practical skills and their ability to design and implement experiments resulting in a supervisor's mark.

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

Mode of Assessment

Type	Method	Description	Length	Weighting	Final Assess'
Summative	Presentation	A 20 minute oral presentation of the project with 10 minutes of questions	30 minutes	10%	No
Summative	Coursework	Project report	-5000 words	80%	Yes
Summative	Clinical Assessment	A report from the workplace supervisor of student's performance in laboratory	-250 words	10%	No

Legacy Code (if applicable)

BM-3129K

Reading List

To view Reading List, please go to [rebus:list](#).