

| Module Details |                                     |
|----------------|-------------------------------------|
| Module Title   | Biomedical Science Research Project |
| Module Code    | BIS6026-D                           |
| Academic Year  | 2022/3                              |
| Credits        | 40                                  |
| School         | School of Chemistry and Biosciences |
| FHEQ Level     | FHEQ Level 6                        |

| Contact Hours                  |       |
|--------------------------------|-------|
| Type                           | Hours |
| Lectures                       | 20    |
| Practical Classes or Workshops | 18    |
| Tutorials                      | 4     |
| Laboratories                   | 160   |
| Directed Study                 | 194   |
| Interactive Learning Objects   | 4     |

| Availability |                                        |
|--------------|----------------------------------------|
| Occurrence   | Location / Period                      |
| BDA          | University of Bradford / Academic Year |

| Module Aims                                                                                                                                                                                                                           |
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| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| Methods used in Biomedical 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, bioimaging and bioinformatics. Use of referencing software, scientific writing, literature searching. In conjunction with the careers service, employability skills and job applications will also be covered. |

| Learning Outcomes |                                                                                                                                                                                                         |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Outcome Number    | Description                                                                                                                                                                                             |
| 01                | Critically describe, explain and make appropriate judgements around a current research topic in Biomedical Sciences whilst evaluating approaches used to investigate this topic (HCPC standards 1, 13). |
| 02                | Plan and execute a programme of original research (HCPC standards 4,14).                                                                                                                                |
| 03                | Assess the chemical, biological & ethical aspects of research in accordance with local policy and laboratory safety protocols. (HCPC standards 2, 2.8,3,14,15).                                         |
| 04                | Select appropriate statistical techniques for a range of scientific analyses.                                                                                                                           |
| 05                | Conduct appropriate research competently and demonstrate skills appropriate to the project undertaken (HCPC standards 14)                                                                               |
| 06                | Construct and maintain research records appropriately (HCPC standard 10).                                                                                                                               |
| 07                | Analyse & evaluate the information collected (HCPC standard 14). Perform effective literature searches.                                                                                                 |
| 08                | Clearly convey information or results to the appropriate level of detail.                                                                                                                               |
| 09                | Compile a piece of scientific writing that presents and interprets data in a clear and effective way using correct biomedical and medical language and terminology (HCPC standards 8).                  |
| 10                | Demonstrate understanding of the issues, which are important in generating reliable data and knowledge of key laboratory skills.                                                                        |

| Learning, Teaching and Assessment Strategy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <p>This module uses a blended approach to support learning and achievement. Students will engage with a series of online learning packages as well as onsite lectures. These will include short videos that address key concepts. Virtual lab simulation tutorials will be used to assess understanding. Students will also have onsite workshops for COSHH, RA and Ethics.</p> <p>The type of projects offered will include computational, mixed and wet lab projects, each of which will include a 4 week intensive data collection and analysis period at the start of semester 2. Each student will be assigned an individual research topic and will be allocated a supervisor who they will have meetings with.</p> <p>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.</p> |

| Mode of Assessment |                                    |                                                                                                                         |           |
|--------------------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-----------|
| Type               | Method                             | Description                                                                                                             | Weighting |
| Summative          | Coursework - Written               | 1000 words (equivalent) Project background and plan (LOs1-10).                                                          | 10%       |
| Summative          | Coursework - Portfolio/e-portfolio | Supervisor's assessment of student's performance in laboratory. Lab books and meeting records as evidence. (LO2,3,5,6). | 10%       |
| Summative          | Dissertation or Project Report     | 5000 words Project report (LOs1-10).                                                                                    | 65%       |
| Summative          | Presentation                       | Conference-style poster presentation on the project (LOs1-3, 7, 8).                                                     | 15%       |

| Reading List                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| To access the reading list for this module, please visit <a href="https://bradford.rl.talis.com/index.html">https://bradford.rl.talis.com/index.html</a> |

*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.*

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