

| Module Details         |                                                                            |
|------------------------|----------------------------------------------------------------------------|
| <b>Module Title:</b>   | Research Project – Preparatory Investigations                              |
| <b>Module Code:</b>    | CFS7022-B                                                                  |
| <b>Academic Year:</b>  | 2019-20                                                                    |
| <b>Credit Rating:</b>  | 20                                                                         |
| <b>School:</b>         | School of Chemistry and Biosciences                                        |
| <b>Subject Area:</b>   | Chemistry                                                                  |
| <b>FHEQ Level:</b>     | FHEQ Level 7 (Masters)                                                     |
| <b>Pre-requisites:</b> |                                                                            |
| <b>Co-requisites:</b>  | Research Skills, Professional Development and Commercial Awareness 2019-20 |

| Contact Hours  |       |
|----------------|-------|
| Type           | Hours |
| Lectures       | 4     |
| Seminar        | 1     |
| Laboratory     | 120   |
| Directed Study | 75    |

| Availability |                                                 |
|--------------|-------------------------------------------------|
| Occurrence   | Location / Period                               |
| BDA          | University of Bradford / Semester 2 (Feb - May) |

| Module Aims                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>This module builds on the semester 1 module, Research skills, professional development, and commercial awareness. Instruction in further specific research related skills required for the research project will be given, and students will have the opportunity to apply chemical knowledge and laboratory skills in a practical research project. Students will also develop their abilities in providing constructive feedback to their peers.</p> |

| Outline Syllabus                                                                                         |
|----------------------------------------------------------------------------------------------------------|
| <p>Students will be introduced to the concept of peer-review, and will provide feedback on a project</p> |

proposal from one of their peers. Students will commence work on the research project that they developed in semester 1. Students will: be guided in strategically planning their experimental work (Gantt Chart); carry out all appropriate COSHH assessments for all stages of their practical work; source and access relevant published work; be required to meet with their supervisor regularly to discuss interim reports and to propose the next steps in the project. Instruction will be given by library staff in critical reading of the scientific literature. At the end of the module students will write an introduction to their research project. An interim presentation of results and future work will be given in the form of a poster presentation to staff and peers.

### Learning Outcomes

|   |                                                                         |
|---|-------------------------------------------------------------------------|
| 1 | Select and use appropriate research equipment without supervision       |
| 2 | Critically evaluate previous work in their area of research             |
| 3 | Critically evaluate a research proposal                                 |
| 4 | Independently prepare COSHH and related health and safety documentation |
| 5 | Provide constructive feedback to peers                                  |
| 6 | Reflect on feedback given by peers                                      |
| 7 | Present results in a poster presentation                                |

### Learning, Teaching and Assessment Strategy

Lectures will be used to deliver background information on the further study skills required to critically engage with the primary literature.

Students are expected to devote 120 hours (10 hours per week) to their research project. This is individual work on an original piece of research. The student is required to work independently on their project, to seek advice or practical help when appropriate, with regular communication with their project supervisor(s).

The student will be allocated a supervisor(s) who will provide practical support and guidance throughout the project in areas such as: data collection, data analysis, discussion, summarising of findings and presentation of results. Additional support will be provided by members of the technical staff. Supervision will be achieved through formal tutorial meetings with your supervisor(s) (6 recommended) and other supervised activities appropriate to the research method employed. Individual supervision will allow the student the opportunity to discuss their ideas, concerns and progress.

Instruction on how to critically engage with the scientific literature will be given by library staff in lectures and workshops.

At the beginning of the module students will peer-review a project plan from one of their colleagues and provide feedback. Students will be graded on the quality and usefulness of this feedback.

Students will also be asked to reflect on the feedback they receive.

At the end of the module students will submit a literature review for formative assessment. This will then form the introduction of the final dissertation.

An interim report on progress made in the project will be given in the form of a poster

presentation.

### Mode of Assessment

| Type      | Method       | Description                                                                                                    | Length      | Weighting |
|-----------|--------------|----------------------------------------------------------------------------------------------------------------|-------------|-----------|
| Summative | Presentation | Poster presentation                                                                                            | 20 minutes  | 30%       |
| Summative | Coursework   | An introduction to the research project – place the students' work in context within the scientific literature | -2000 words | 50%       |
| Summative | Coursework   | Provide feedback on a research proposal, reflect on feedback given by peers.                                   | -1000 words | 20%       |

### 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.*