Module Code:	SCI628

Module Title:	Research Project

Level:	6	**Credit Value:**	40

Cost Centre(s):	GAFS	JACS3 **code**:	F100

School:	Applied Science, Computing & Engineering	**Module Leader:**	Dr Amiya Chaudhry

Scheduled learning and teaching hours	48 hrs
Guided independent study	152 hrs
Placement	0 hrs
Module duration (total hours)	200 hrs

Programme(s) in which to be offered (not including exit awards)	Core	Option
BSc (Hons) Chemistry	✓	☐

Pre-requisites
None

Module Aims
The module is intended to: • Enable students to integrate and apply knowledge gained during their degree studies in a self-motivated, practical, enquiring and problem solving manner, thereby extending their own learning to a specific area in chemistry, green chemistry, nanotechnology or material science. • Develop student's practical research expertise and prepare them for postgraduate study/graduate level employment in science.

Intended Learning Outcomes
Key skills for employability KS1   Written, oral and media communication skills KS2   Leadership, team working and networking skills KS3   Opportunity, creativity and problem solving skills KS4   Information technology skills and digital literacy KS5   Information management skills KS6   Research skills KS7   Intercultural and sustainability skills KS8   Career management skills KS9   Learning to learn (managing personal and professional development, self-management) KS10   Numeracy

At the end of this module, students will be able to		Key Skills	
1	Develop a research project	KS6	
2	Collect and critically appraise written scientific information.	KS5	
3	Critically evaluate experimental information and appropriately set up instrument or research methodology and strategy.	KS3	KS6
4	Formulate an in-depth understanding of the scientific topic, construct scientific argument and incorporate a critical ethical dimension wherever applicable.	KS3	
5	Present and defend the research outcomes orally and in writing.	KS1	KS4

Transferable skills and other attributes

- Numeracy.
- Time management skills.
- Interpretation and presentation of scientific information.
- Written and oral communication skills
- Opportunity, creativity and problem solving skills
- Research skills

Derogations
N/A

Assessment:

Indicative Assessment Tasks:

Assessment 1. The student will orally present and defend the project plan, research methodology and findings of their final year project.

Assessment 2. Extended piece of written work (7000-9000 words) on the write-up of a final-year project. The content will include a literature review, project plan, appropriate research methodology and reflection on the findings of the investigation.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)	Duration (if exam)	Word count (or equivalent if appropriate)
1	1,2,3,4,5	Oral Assessment	20	20 minutes	
2	1,2,3,4,5	Dissertation	80		7000-9000

Learning and Teaching Strategies:

Lectures, tutorials and time spent in the laboratory under the guidance of appropriate staff on experimental setup and use of instruments will count towards contact hours.

Students will receive introductory lectures outlining the aim of the module and giving (generic) guidance on how to carry out the work. Students will also have individual tutorials with their project supervisor to guide their work and ensure appropriate progress is being made.

Practical work will be performed by the student under the direction of appropriate staff members..

Syllabus outline:

Research, as appropriate, on an agreed topic.

Indicative Bibliography:
Essential reading
This will depend on the project. Essential reading is expected to be mainly research papers.
Other indicative reading
Walliman, N. (2018), Research Methods: The Basics. 2nd ed. London: Routledge. Williams, M. (2008), The Principles of Project Management. Collingwood: Sitepoint.