PRIFYSGOL glyndŵr UNIVERSITY

MODULE SPECIFICATION FORM

Module Title: **Research Project**	Level: 6	Credit Value: 40

Module code: SCI618	Cost Centre: GAFS	JACS3 code: F100

Trimester(s) in which to be offered: 1&2	With effect from: September 2014
Office use only: To be completed by AQSU:	Date approved: July 2014 Date revised: - Version no: 1

Existing/New: New	Title of module being replaced (if any):

Originating Academic Department: Chemistry	Module Leader: Dr Amiya Chaudhry

Module duration (total hours): 400 Scheduled learning & teaching hours 60 Independent study hours 340	Status: core/option/elective (identify programme where appropriate): Core

Programme(s) in which to be offered: BSc (Hons) Chemistry with Green Nanotechnology.	Pre-requisites per programme (between levels): 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:

At the end of this module, students will be able to ...

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)

Key skills for employability

1. Written, oral and media communication skills
2. Leadership, team working and networking skills
3. Opportunity, creativity and problem solving skills
4. Information technology skills and digital literacy
5. Information management skills
6. Research skills
7. Intercultural and sustainability skills
8. Career management skills
9. Learning to learn (managing personal and professional development, self management)
10. Numeracy

Assessment:

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	5	Presentation	20%		15 min
2	1-5	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.

Bibliography:

Essential reading:

This will depend on the project. Essential reading is expected to be mainly research papers.

Other indicative reading:

Williman, N. (2011) *Research Methods,* London: Routledge.

Williams, M. (2008) *The Principles of Project Management,* Sitepoint.