Module Code: MOD008110	**Version:** 1 **Date Amended:** 01/05/2022

1. Module Title
Chemistry

2a. Module Leader
Hilary Conlan

2b. School
SE: ARU College

2c. Faculty
Faculty of Science and Engineering

3a. Level
3

3b. Module Type
Standard (fine graded)

4a. Credits
15

4b. Study Hours
150

5. Restrictions			
Type	**Module Code**	**Module Name**	**Condition**
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:	**N/A**		

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description
This module will provide you with an elementary introduction to chemical science for those with little or no prior experience of the subject. You will discuss the study of materials and the undergoing chemical changes. You will then develop these principles further by exploring the periodic table, chemical equations, calculating concentrations, quantitative chemical analysis such as colorimetry, chemical equilibria and organic chemistry. The practical element of the course will allow you to gain practice in some basic laboratory techniques based on the concepts covered in the lectures. In addition, you will have tutorials to ask questions and to practice exam-style questions from the relevant lectures Laboratory experience and exposure which will also equip you with the required transferable skills. The focus will also be on good laboratory practice and sustainable approaches to chemistry

6b. Outline Content
· Introduction to the periodic table, compounds and mixtures including atoms, molecules, the mole concept, chemical formulae and equations · Electronic structure and chemical bonding · Chemical Reactions, catalysts and enzymes Colorimetry and quantification · Chemical equilibria · Organic Chemistry – IUPAC · Organic Chemistry – Isomers, particularly as they apply to macromolecules · Organic Chemistry – Monomers and Polymers (structural rather than biological examination of Carbohydrates, Lipids, Polypeptides and Nucleic Acids) · Basic practical techniques e.g. titration.

6c. Key Texts/Literature
The reading list to support this module is available at: http://readinglists.anglia.ac.uk/modules/mod008110

6d. Specialist Learning Resources
Laboratory: 2 x 2hours

7. Learning Outcomes (threshold standards)		
No.	**Type**	**No. Type On successful completion of this module the student will be able to**
1	Knowledge and Understanding	Understand the basic principles of chemistry and use these to under-pin further learning.
2	Knowledge and Understanding	Understand the basic principles of quantification and use these to underpin further learning.

3	Intellectual, practical, affective and transferrable skills	Work safely in a chemistry laboratory using practical techniques and display appropriate levels of numeracy.
4	Intellectual, practical, affective and transferrable skills	Develop autonomy, skills of self-evaluation and the ability to use a range of learning resources.

8a. Module Occurrence to which this MDF Refers				
Year	**Occurrence**	**Period**	**Location**	**Mode of Deliver**
2021/2	F01CAM	Trimester 2	ARU Cambridge Campus	Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	**Hours**	**Learning Outcomes**	**Details of Duration, frequency and other comments**
Lectures	0	None	None
Other teacher managed learning	48	1-4	4 hours per week x 12 teaching weeks
Student managed learning	102	1-4	Pre and post session preparation, reading and research. Other tasks as detailed in the module guide
TOTAL:	150		

9. Assessment for the above Module Occurrence					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark**
010	Coursework	1-4	50 (%)	Fine Grade	30 (%)
011	Coursework	1-4	50 (%)	Fine Grade	30 (%)
010/1- Lab Report up to 1500 words 011/1- In-class Test up to 1.5hrs					

Assessment components for Element 010			
Component No.	**Assessment Title**	**Submission Method**	**Components needed for Mark Calculation?**
010/1	Assessment A: Lab Report	Online Submission	50 %

Assessment components for Element 011

Component No.	Assessment Title	Submission Method	Components needed for Mark Calculation?
011/1	Assessment B: In-class test	In-class submission	50 %

In order to pass this module, students are required to achieve an overall mark of 40%.
In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment of as specified above
(b) pass any pass/fail elements