

MODULE DESCRIPTOR

Module Title

Oilfield Chemicals

Reference	AS4052	Version	3
Created	June 2017	SCQF Level	SCQF 10
Approved	August 2007	SCQF Points	15
Amended	September 2017	ECTS Points	7.5

Aims of Module

To enable students to evaluate the range, application and methods of analysis of chemicals used in oil exploration and production.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Discuss the properties and application of a range of chemicals used in oil and gas production.
- 2 Discuss and critically compare analytical procedures used for monitoring of production chemicals.
- 3 Apply a variety of analytical techniques to a range of oilfield samples.

Indicative Module Content

Constitution and properties of oil and natural gas, crude oil and surfactant chemistry, scale formation, inhibition and removal, corrosion & corrosion control, water injection chemicals, anti-foams, gas hydrate inhibition, antibacterial chemicals, environmental considerations. Analytical methods applied to the monitoring of oils and production chemicals.

Module Delivery

This is a lecture based module supplemented by practical laboratory classes. External specialist speakers may be involved in the delivery of material.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	40	N/A
Non-Contact Hours	110	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type: Examination Weighting: 100% Outcomes Assessed: 1, 2, 3
 Description: Closed book written examination

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

This module is assessed by one component of assessment as detailed in the Assessment plan. To pass this module, candidates must achieve a Module Grade D or better.

Module Grade	Minimum Requirements to achieve Module Grade:
A	Final mark of 70% or greater in C1
B	Final mark of between 60-69% in C1
C	Final mark of between 50-59% in C1
D	Final mark of between 40-49% in C1
E	MARGINAL FAIL. Final mark of between 35-39% in C1
F	FAIL. A final mark of less than 35% in C1
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	Successful completion of Stage 3 Forensic and Analytical Science or equivalent.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

- 1 FRENIER, W., ZIAUDDIN, M., *Formation, Removal and Inhibition of Inorganic Scale in the Oilfield Environment*. Current Edition. SPE.
- 2 KELLAND, M., *Production Chemicals for the Oil and Gas Industry*. Current Edition. CRC Press
- 3 FINK, J.K., *Petroleum Engineer's Guide to Oil Field Chemicals and Fluids*. Current Edition. Elsevier.