2022
COURSES OFFERED BY THE CHEMISTRY DEPARTMENT AT DUT

1. GENERAL LABORATORY PRACTICE COURSE **(SCGLPR)**

Course Outline:

- This is a **3-day** theoretical and practical training course to introduce the basic techniques in laboratory practice.
- Calibration of general laboratory apparatus
- Standardization and quantitation techniques
- Laboratory safety protocols

Who should attend?

- This course is designed for the beginner, operator or those persons who have very basic laboratory skills.
- Laboratory technicians

Content

- Introduction to matter; mixtures and pure substances
- Elementary physical and chemical properties of substances
- Calibration of pipettes and burettes using density
- Standardization of a secondary standard
- Quantitative analysis using a titrimetric analysis
- General safety protocols.

Admission Requirements

- Knowledge of basic chemistry with some laboratory experience.
- A background knowledge of maths and science is preferable but not essential

Cost: Cost per candidate: R6 500. **Minimum number of candidates: 10**

2. Basic GAS CHROMATOGRAPHY COURSE **(SCBGCH)**

Course Outline:

- This is a **3-day** theoretical and practical training course to introduce the elementary operating principles of gas chromatography.

Who should attend?

- This course is designed for the beginner, operator or those persons who have very basic skills in the use of a gas chromatograph.

Content

- Instrument familiarization, setting up and injection technique using GC.
- Influence of temperature and sample size on column efficiency.
- Quantitative analysis using GC

Admission Requirements

- Some basic knowledge and experience of chromatography.
- A background knowledge of maths and science is preferable but not essential

Cost
Cost per candidate: R9 750. **Minimum number of candidates: 6**

3. Advanced GAS CHROMATOGRAPHY COURSE **(SCAGCH)**

Course Outline:

- This 5-day theoretical and practical training course will cover the more complex aspects of the theory and practice of gas chromatography.

Who should attend?

- This course is designed specifically for chromatographers with basic skills in the use of a gas chromatograph.
- Laboratory Managers/Supervisors
- Researchers
- Research assistants

Content

- Review of separation theory
- Applications and use of a range of detectors specific to gas chromatography
- Column selection and installation
- Injector systems
- Split/splitless injections
- Quantitative analysis using GC

Admission Requirements

- Knowledge and experience in gas chromatography.
- Basic mathematical skills

Cost
Cost per candidate: R16 500.

Minimum number of candidates: 6

4. Basic ATOMIC ABSORPTION SPECTROSCOPY COURSE **(SCBASP)**

Course Outline:

- This is a **3-day** theoretical and practical training course to introduce the elementary operating principles of Atomic absorption spectroscopy.
- Candidates will be able to safely use an atomic spectrometer to perform tasks such as basic quantitation and analysis.

Who should attend?

- This course is designed for the beginner, operator or those persons who have very basic skills in the use of an atomic spectrometer

Content

- Instrument familiarization, setting up and optimization of the AAS
- Preparation of standards and analysis of samples by the instrumental technique.
- Calibration and Quantitative analysis

Admission Requirements

- Some basic knowledge or experience of atomic absorption spectroscopy.
- A background knowledge of maths and science is preferable but not essential

Cost
Cost per candidate: R9 750.

Minimum number of candidates: 6

5. Advanced ATOMIC ABSORPTION SPECTROSCOPY COURSE **(CSAASP)**

Course Outline:

- This is a **5-day** theoretical and practical training course that will cover the more complex aspects of the theory and practice of an Atomic absorption spectrometer.

Who should attend?

- This course is designed specifically for laboratory personnel with basic skills in the use of an AAS.
- Laboratory Managers/Supervisors
- Researchers
- Research assistants

Content

- Review of basic theory of atomic spectroscopy
- Burner rotation technique
- Effect of slit-width.
- Calibration and Quantitative analysis
- Applications of AAS

Admission Requirements

- Knowledge and experience in atomic spectroscopy.
- Basic mathematical skills

Cost

Cost per candidate: R16 500.

Minimum number of candidates: 6

NB. All courses are subject to a minimum number of candidates registering to make them viable.

Should we not meet the minimum numbers, please enquire about the course being conducted in-house at your company. Terms and conditions apply.

DETAILS FOR REGISTRATION:

Please indicate your preference, then complete the following details and email to the administrators Philiswa: philiswad@dut.ac.za and/or
Selisha: selishar@dut.ac.za

COURSES OFFERED in 2022	COURSES DATES	TICK YOUR PREFERENCE
General Lab Practice	**July 11 - 15**	
Basic Gas Chromatography	**July 11 - 15**	
Basic Atomic Absorption Spectroscopy	**July 11 - 15**	
Advanced Atomic Absorption Spectroscopy	**Nov. 14 - 18**	
Advanced Gas Chromatography	**Nov. 14 - 18**	

Name: (Mr/Mrs/Miss/Ms) _____

Organization/Company: _____

Address: _____

NB: Class sizes are limited and reservations are on a first-come, first-served basis. Please book early to avoid disappointment.

☐ I am interested in attending the above courses on the dates indicated. Please send me more information and application form(s).

☐ I am interested in a short training course(s) in the following Analytical Chemistry Technique/s not listed in the above program.

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☐ I am interested in in-house training at my organization/company. Please contact me in this regard.

For further information and application forms, please contact:

Centre for Continuing Professional Education (CCPE)

1. Philiswa Charity Dlamini
Phone: 031 3736016
Email: philiswad@dut.ac.za

or

2. Selisha Ramduth
Phone: 031 3736017
Email: selishar@dut.ac.za

Thank you
Mr. N Ramnarayan
Short Course Co-ordinator: Chemistry Department