



WHAT IS ANALYTICAL CHEMISTRY?

Analytical Chemistry is the study of which substances are present (qualitative analysis) and how much is present (quantitative analysis) in a sample. Samples are diverse in nature and include mineral rock, plants, insecticides, water, fuel, blood and medicines. These analyses involve determining the structure and identification of elements and compounds by means of their physical and chemical properties.

WHAT IS THE PURPOSE OF THIS COURSE?

- To empower students to obtain a skills orientated qualification - laboratory technician
- To train natural scientists to be employed in various sectors of the economy
- To train specialists in natural sciences
- To create further opportunities in research and for post-graduate studies
- To make a national and international contribution to the promotion of research and development in natural sciences

HOW COULD I BENEFIT FROM THIS COURSE?

This course will equip the learner with the following:

- Essential analytical skills required by laboratory technicians, researchers and managers of quality control, production control, research and development and analytical techniques
- Applicable skills to specialise further in related fields of chemistry
- Entrepreneurial skills
- The basic knowledge to empower individuals in science education
- A passion for chemistry

ARE THERE ANY OTHER BENEFITS?

On successful completion of this course it will give individuals access to:

- Various other study opportunities, e.g. Master and Doctor degrees in Technology
- National or international research qualifications and bursaries
- National or international career opportunities

WHY IS THIS COURSE SO UNIQUE?

This is the only course which emphasises Analytical Chemistry and provides training to obtain hands-on skills on analytical instrumentation. The lecturers are highly experienced professional educators and globally recognised researchers in various research fields.

WHAT QUALIFICATIONS CAN YOU OBTAIN?

- National Diploma: Analytical Chemistry
- A Bachelor Degree in Technology in Chemistry
- A Master Degree in Technology in Chemistry
- A Doctor Degree in Technology in Chemistry

The National Diploma is also offered as an extended course incorporating a foundation phase, so that students have a longer period to adapt to the tertiary environment and obtain the necessary skills to complete the course successfully.

WHAT ARE THE ADMISSION REQUIREMENTS?

A National Senior Certificate (NSC) with an adequate achievement (i.e. a score of 4 or more) in English, Mathematics and Physical Science. In addition, the total APS score for six subjects, excluding life orientation, must be at least 21

WHAT IS THE DURATION OF THE COURSE?

Three (3) years full-time study (4 semesters of formal tuition and 2 semesters of work integrated learning at a company or research laboratory). The extended course has a minimum duration of three and a half (3.5) years

WHAT WILL IT COST?

Each of the years of formal education at the University will cost about R22 700 for classes, excluding accommodation, books, etc.

WHAT KIND OF PERSON WOULD ENJOY ANALYTICAL CHEMISTRY?

A person who:

- has a passion to explore and investigate
- likes to work with their hands
- would like to work in a laboratory environment
- has the potential to acquire analytical thinking skills

CAN YOU STUDY PART-TIME?

No part-time or evening classes are offered; only full-time classes for all the subjects for the National Diploma: Analytical Chemistry. The B Tech: Chemistry is offered on a block/day-release system where two (2) subjects are offered per week on two (2) days

WHAT IS THE COURSE CONTENT?

The course consists of theory subjects and practical laboratory classes. The following subjects are presented:

Year 1

Part I (January-June) and (July-November)

Analytical Chemistry I (Major subject)/Chemistry IA/Physics IA/Mathematics I/Computer Skills I

Part II (January-June) and (July-November)

Analytical Chemistry II/Analytical Chemistry: Practical II/Physical Chemistry II /Organic Chemistry II/Inorganic Chemistry II

Year 2

Part III (January-June) and (July-November)

Organic Chemistry III/Inorganic Chemistry III/Physical Chemistry III/Chemical Process Industries II

Part IV (January-June) and (July-November)

Analytical Chemistry III/Analytical Chemistry: Practical III/Chemical Quality Assurance

Year 3

Part V (January-June) and (July-November)

Experiential Learning Work for 6 months in a chemistry laboratory.

Or

Mathematics II/Physics II/Entrepreneurial Skills/Industrial Chemical Analysis/Environmental Chemistry II



Part VI (January-June) and (July-November)

Chemistry: Project III

Work for 6 months in a chemistry laboratory. A written project on your work must be submitted.

On successful completion of the abovementioned subjects a learner qualifies for a National Diploma: Analytical Chemistry.

FOR FURTHER STUDIES:

QUALIFYING SUBJECTS TO CONTINUE TO THE B TECH: CHEMISTRY:

Mathematics II/Physics II

One-day-per-week per subject: (January-June) and (July-November)

BTECH: CHEMISTRY

- Organic Chemistry IV (January-June)
- Analytical Chemistry IV (January-June)
- Inorganic Chemistry IV (July-November)
- Physical Chemistry IV (July-November)
- Chemistry Project IV (January-June or July-November)

On successful completion of the abovementioned subjects a student qualifies for a B Tech: Chemistry.

WHAT IS THE CLOSING DATE FOR APPLICATIONS?

15 August of the preceding year of your intended commencement of studying

HOW DO I REGISTER FOR THIS COURSE?

Submit the following documents:

- Completed application form
- Certified copies of your latest school results
- Certified copy of identity document
- Direct deposit, cheque or postal order for the administration fee made out to Tshwane University of Technology (payment may be in cash if an application is submitted in person)

Mailed to:

The Registrar: Academic
TSHWANE UNIVERSITY OF TECHNOLOGY
Private Bag X680
Pretoria 0001

or submit the application documents in person at:

Building 21
Ground Level
Pretoria Campus
Pretoria West

Tshwane University of Technology - Enquiries:

Telephone number: Call centre: 086 110 2421/2
Telephone number: Switchboard: 012 382 5911 or visit the website at: www.tut.ac.za

PLEASE NOTE INTAKE/ALL CLASSES ON THE ARCADIA CAMPUS

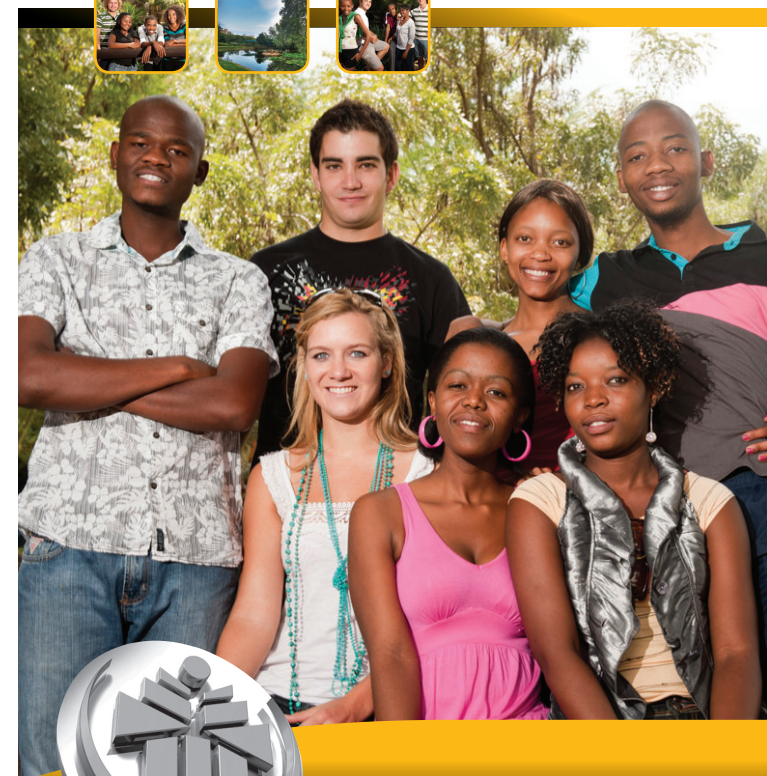


Tshwane University
of Technology

We empower people

Department of Chemistry
Analytical Chemistry

Faculty of Science



Live your life. Create your destiny.