



# **AFRICAN BIOMANUFACTURING Workforce Training and Skills Development Programme**




**science & innovation**

Department:  
Science and Innovation  
REPUBLIC OF SOUTH AFRICA



# **CSIR**

Touching lives through innovation



**The CSIR will be launching the *African Biomanufacturing Workforce Training Programme*, designed to support training and development in the biomanufacturing sector with the intent to develop a skilled and competent workforce on the continent. It is expected to run over three years, commencing in June 2023.**

The programme will provide a technology development and hands-on training destination to support and grow biomanufacturing activities on the African continent.

In line with this programme, the CSIR will be offering a course in biomanufacturing technologies (CSIR-BT-1A).

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## **COURSE IN BIOMANUFACTURING TECHNOLOGIES (CSIR-BT-1A)**

**The CSIR's goal in providing this course is to assist in growing and developing the biomanufacturing sector on the African continent through cutting-edge training and innovative bioprocess solutions.**

The course is offered to African manufacturers, scientists and other key players in the development and scaling-up of biomanufacturing processes and products. The programme provides hands-on training and skills development that will enable local manufacturing of biologics, vaccines, recombinant proteins and therapeutics.

The programme is aligned to a number of other initiatives that are focused on establishing viable biomanufacturing industries on the African continent. These include the Biomanufacturing Industry Development Centre and the Industrial Biocatalysis Hub, hosted at the CSIR.

### **COURSE DESCRIPTION**

The Biomanufacturing Technologies Course provides comprehensive competency building and skills transfer across all aspects relating to biomanufacturing, such as an in-depth look at the challenges and solutions for production and scale-up across various expression platforms.

The course will be delivered as a mixed model of applied and advanced knowledge transfer in the form of classroom-based lectures, workshops and hands-on training (all onsite at the CSIR).

## KEY AREAS OF DEVELOPMENT INCLUDE:

- Upstream bioprocess development
- Downstream processing
- Protein purification and formulation
- Hands-on training across all unit operations
  - Cell bank establishment
  - Inoculum development and validation
  - Bioreactor set up and production at 10-30 L scale
  - Downstream product recovery
  - Product purification and polishing (including prep HPLC)
  - Product stabilisation and formulation
  - Process calculation and analysis
  - Data presentation



## COURSE DATE AND DURATION

**DATE: 12 JUNE 2023 TO 7 JULY 2023**

**DURATION: FOUR WEEKS INTENSIVE ONSITE  
(CSIR, PRETORIA, SOUTH AFRICA)**



## COURSE DELIVERY

The course will take place onsite (CSIR, Pretoria, South Africa), using a blended format to transfer advanced knowledge, including:

- Hands-on training;
- Classroom-based lectures;
- Workshops; and
- Computer simulations (scale-up modeling).

## COST AND FINANCING

A maximum of 25 candidates will be selected. For South African candidates, the funding includes course fees.

**For candidates from other African countries, the funding includes:**

- Course fees;
- Visa fee reimbursement; and
- Documents to facilitate visa application.

**Travel for 10 people will be sponsored as follows:**

- Five local; and
- Five international, based on the submitted motivations.

**This includes:**

- A return air ticket;
- Return ground transport from the airport to the accommodation; and
- Daily ground transport from the accommodation to the CSIR (course venue).

Accommodation and subsistence and travel allowance will not be covered. A list of available accommodation can be provided on request.

## WHO SHOULD ATTEND?

**Preference will be given to the following candidates:**

- Current staff in the biomanufacturing sector who require skills expansion/upgrading;
- New or developing staff in the biomanufacturing sector;
- Identified staff or new recruits into a biomanufacturing facility; and
- Representatives from biomanufacturing facilities that are currently under construction and that will require a skilled workforce.

**APPLICATIONS** from qualified persons from all African Union member states will be accepted. Young females are encouraged to apply. For enquiries, please email [bidc@csir.co.za](mailto:bidc@csir.co.za)

## IMPORTANT DATES

- **The deadline for the submission of applications is 30 APRIL 2023.**
- **Selected candidates will be notified by 12 MAY 2023.**

Applications should be submitted by filling in the application form available at:

**[African bio-manufacturing workforce training and skills development programme \(office.com\)](#)**

