



AFRICAN BIOMANUFACTURING Workforce Training and Skills Development Programme



science, technology
& innovation

Department:
Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA



CSIR
Touching lives through innovation



The CSIR hosts the African Bio-Manufacturing Workforce Training and Skills Development Programme aimed at supporting training and development in the biomanufacturing sector. The programme, focused on developing a skilled and competent workforce within the sector in Africa, commenced in June 2023 and will run over a period of three years.

This programme provides both a technology development and a hands-on training destination to support and grow biomanufacturing activities on the African continent.

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

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. A key aspect of this programme is to provide hands-on training and skills development that will enable local manufacturing of biologics, vaccines,

recombinant proteins and therapeutics. This programme is aligned to a number of other initiatives that are focused on establishing vibrant biomanufacturing industries on the African continent. These include the Biomanufacturing Industry Development Center (BIDC) and the Industrial Biocatalysis Hub (IBH), 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 including fungal, yeast, bacterial and mammalian systems.

This 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.

KEY AREAS OF DEVELOPMENT INCLUDE:

- Upstream Bioprocess Development
- Downstream Processing
- Protein Purification and Formulation
- Hands-on training across all unit operations
 - Cell bank establishment
 - Expression host improvements
 - Inoculum development and validation
 - Bioreactor set up and Production at 10-30L scale.
 - Downstream product recovery
 - Product purification and polishing (chromatography)
 - Analytical analyses
 - Product stabilisation and formulation
 - Process calculation and Analysis
 - Data presentation



COURSE DATE AND DURATION

DATE: 5 - 30 MAY 2025

DURATION: 4 WEEKS (2 WEEKS INTENSIVE ONLINE AND 2 WEEKS ON-SITE , CSIR, PRETORIA, SOUTH AFRICA)



COURSE DELIVERY

The course is delivered using a blended format to transfer advanced knowledge, including:

- Hands-on training
- Classroom-based lectures (online* and in person)
- Workshops

**please note that you will need a good quality internet connection to be able to participate effectively in the online sessions. It is recommended that a good download and upload speed is at least 5-10 Mbps.*

COST AND FINANCING

Please note that a maximum of 25 candidates will be selected. For South African candidates, the funding includes:

- Course fees
- Travel (flights) and accommodation for the two weeks on-site training
- Ground transport return from the airport to accommodation x 1
- Daily ground transport from accommodation to the CSIR (course venue)

Scholarships will be provided for 5 participants from the African continent based on the submitted motivations.

Subsistence and travel allowance (S&T) will not be covered.

WHO SHOULD ATTEND?

Preference will be given to the following candidates:

- Current staff in the Biomanufacturing sector requiring skills expansion/upgrading
- New or developing staff in the Biomanufacturing sector
- Identified staff or new recruits into a biomanufacturing facility
- From biomanufacturing facilities currently under construction that will require skilled workforce

Applications from qualified persons from all AU Member states will be accepted. Young females are encouraged to apply. For enquiries, please email **BIDC@CSIR.co.za**.

IMPORTANT DATES

- Deadline for submission of application: 21 February 2025
- Selected candidates will be notified by 14 March 2025

Applications should be submitted by filling in the [application form](#) available at this link:

<http://bit.ly/3ZqNFZv>

