# 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 launched the African Bio-Manufacturing Workforce Development and Training Programme in June 2023. The programme, aimed at developing skilled and competent workforce in the biomanufacturing sector in Africa, is expected to run over a period of three years.**

**Applications are now open for the second intake of the programme on Vaccine Production Technologies (CSIR-VP-1A). The course will run for over four weeks, comprising two weeks of online sessions and another two weeks of compulsory in-person training at the CSIR.**

**This programme will provide both a technology development and a hands-on training component to support and grow vaccine biomanufacturing activities on the African continent.**

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# COURSE IN VACCINE PRODUCTION TECHNOLOGIES (CSIR-VP-1A)

**The CSIR's goal, in providing this course, is to assist in growing and developing the vaccine production sector on the African continent through training and innovative bioprocess solutions.**

The course is offered to African manufacturers, scientists and other key players in the development and scaling-up of vaccine production processes and active pharmaceutical ingredient (APIs).

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

## COURSE DESCRIPTION

The vaccine production course provides comprehensive competency building and skills transfer across all aspects relating to vaccine production, including an in-depth look at the challenges and solutions for production and scale-up across various expression platforms including fungal, yeast, bacterial, mammalian and plant systems.

This course will be delivered as a mixed model of applied and advanced knowledge transfer in the form of online-based lectures, industry tours and hands-on training (on-site at the CSIR).

## KEY AREAS OF DEVELOPMENT INCLUDE:

- Vaccine Production Platforms
  - Modes of production
  - Process unit operations
  - Platform-based manufacturing systems
- Production Stages
  - Upstream Bioprocess Development for the production of vaccines
  - Downstream processing
  - Vaccine purification and formulation
  - Sterile filling
- Hands-on training across all unit operations using CHO-cell lines
  - Cell line storage and maintenance
  - Bench scale production (flasks and single use bioreactors)
  - Downstream product recovery
  - Product purification and polishing
  - Fill and finish

## COURSE DATE AND DURATION

**DATE: 01 JULY 2024 – 26 JULY 2024**

**DURATION: 2 WEEKS ONLINE LECTURES (01 JULY TO 11 JULY 2024) AND 2 WEEKS INTENSIVE IN-PERSON TRAINING AT CSIR, PRETORIA, SOUTH AFRICA; 15 TO 26 JULY 2024)**

## 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 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 vaccine production sector requiring skills expansion/upgrading.
- New or developing staff in the vaccine production sector.
- From vaccine production facilities currently under construction that will require skilled workforce
- A limited number of spaces will be reserved for candidates who have recently completed their PhD (2019-2023) in a field related to bioprocessing of biologics, recombinant proteins or biologics.

Applications from qualified persons from all AU Member states will be accepted. Young females are encouraged to apply. Scholarships will only be available to South Africans holding a Master's or PhD degree. For enquiries, please email **BIDC@CSIR.co.za**.

## IMPORTANT DATES

- Deadline for submission of application: **10 May 2024**
- Selected candidates will be notified by: **31 May 2024**

Applications should be submitted by filling in the **application form** available at this link: **https://bit.ly/3vYluGv**