



SOUTHERN AFRICAN BIOMANUFACTURING TRAINING HUB



science, technology
& innovation

Department:
Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA



CSIR

Touching lives through innovation



SOUTHERN AFRICAN
BIOMANUFACTURING TRAINING HUB



The CSIR-hosted **Southern African Biomanufacturing Training Hub (SA-BTH)** is pleased to announce the commencement of a course titled **“Master the Heart of Biomanufacturing - Bioreactor Operation & Troubleshooting (I-BTH02),”** scheduled to start on **Monday, 23 November 2026**, as part of its Strengthening Biomanufacturing Capabilities in Southern Africa (BIOcapSA) programme supported by KfW Development Bank.

The programme aims to support training and development in the biomanufacturing sector, focusing on developing a skilled and competent workforce in Africa.

MASTER THE HEART OF BIOMANUFACTURING - BIOREACTOR OPERATION & TROUBLESHOOTING (I-BTH02)

The Biomanufacturing Training Hub’s goal in providing this course is to help grow and develop the biomanufacturing sector on the African continent through cutting-edge training in partnership with both local and international stakeholders.

The course is offered to 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 both theoretical and hands-on training and skills development that will enable local manufacturing of biologics, vaccines, recombinant proteins and therapeutics. This programme is aligned with a number of other initiatives that focus on establishing vibrant biomanufacturing industries on the African continent.

COURSE DESCRIPTION

This course equips scientists, technicians and biomanufacturing personnel with the theoretical knowledge and practical competencies required to confidently operate, optimise and troubleshoot bioreactors. Explore bioreactor design, key system components, process parameter control and proven troubleshooting strategies to improve process performance, product quality and manufacturing reliability. Gain the expertise to minimise downtime, maximise productivity and drive successful biomanufacturing operations from laboratory to production scale. Upon completion, participants will be equipped to operate bioreactor systems safely and efficiently, optimise cultivation performance through effective process control, and implement practical solutions that enhance reliability, productivity and scalability in modern biomanufacturing environments.

This course will be conducted through an in-person model of applied and advanced knowledge transfer, including classroom lectures and practical hands-on training.

Key areas of development include:

- Identify components and functions of a lab-scale bioreactor;
- Correctly set up and prepare a bioreactor for operation;
- Calibrate and maintain key probes and sensors;
- Diagnose and troubleshoot common operational issues;
- Apply clean-in-place (CIP) and sterilise in place (SIP) protocols and processes; and
- Apply good laboratory and biosafety practices in bioreactor operations.





COURSE DATE AND DURATION

DATES: 23 NOVEMBER – 27 NOVEMBER (ON-SITE TRAINING)

DURATION: Five (5) days (in-person at the CSIR, Pretoria campus, South Africa)

COURSE DELIVERY

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

- Hands-on training; and
- Classroom-based lectures (in person)

COST AND FINANCING

Please note that a maximum of 20 candidates will be selected. For South African candidates, the funding package includes:

- Course fees (all);
- Travel expenses (flights for 10 participants outside of Gauteng) and accommodation for on-site training;
- One return ground transport from the airport to the accommodation; and
- Daily ground transport from the accommodation to the CSIR (designated course venue)

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 for a biomanufacturing facility; and
- From biomanufacturing facilities currently under construction that will require a skilled workforce.

Applications from qualified persons will be accepted. Young women are encouraged to apply. Participation will only be available to candidates holding a Bachelors of Science or Engineering degree or diploma.

For enquiries, please email **BIDC@csir.co.za**

IMPORTANT DATES

- **DEADLINE FOR SUBMISSION OF APPLICATIONS:**
Sunday, 31 October 2026
- **SELECTED CANDIDATES WILL BE NOTIFIED BY:**
Friday, 6 November 2026.

APPLICATIONS should be submitted by completing the **APPLICATION FORM**.

