



CMS 03 MBS

**TEMPLATE FOR THE DEVELOPMENT OF A FACILITY-
BASED INTERN TRAINING PROGRAM:
MEDICAL BIOLOGICAL SCIENTISTS**

**MEDICAL AND DENTAL PROFESSIONS BOARD:
MEDICAL SCIENCE**

The purpose of this document is to serve as a template to develop a facility-based intern training program which contains the minimum requirements as prescribed in the National Curriculum must be read with the following documents:

- *The National Curriculum: Medical Biological Science – CMS 01 MBS*
- *Guideline for Submission and Assessment of Portfolio of Evidence: Medical Biological Science – CMS 02 MBS*
- *Policy regarding the Training of Intern Medical Scientists – CMS A*
- *Guidelines on Assessment and Moderation of the Portfolio of Evidence: Intern Medical Scientists – CMS H*

The purpose of using a light grey font in this template is to guide on the content. Please replace by your content.

INTERN TRAINING PROGRAM FOR MEDICAL BIOLOGICAL SCIENTISTS IN THE PROFESSIONAL CATEGORY _____

TRAINING FACILITY

Head of Training Facility	
Telephone number	
Email	
Physical address	

TRAINING DEPARTMENT

Head of Training Department	
Telephone number	
Email	
Physical address	

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1. INTRODUCTION

1.1 The training facility and training department

This facility-based internship-training program is based on The National Curriculum and must contain the minimum prescribed requirements.

1.2 Satellite laboratories which form part of this training program and accreditation

Describe in detail the facility, conditions, equipment, staff and physical address of satellite facility. Which component(s) and duration of the training program will be conducted at this facility? Who will be responsible for training at this facility?

1.3 Rotation to other independently HPCSA accredited laboratories

Provide period of accreditation of this facility. Under which professional category is the facility accredited by the HPCSA?

Provide the physical address of the facility.

Describe in detail the facility, conditions, equipment, staff and physical address of satellite facility.

Which component(s) and duration of the training program will be conducted at this facility?

Who will be responsible for training at this facility?

How many intern candidates are allowed at any given time at this facility?

2. ACCEPTANCE CRITERIA FOR INTERNSHIP TRAINING

Prescribe the entrance level academic qualification, selection criteria or any other requirements

3. OVERALL COURSE OUTCOMES

At the end of this internship, you will be able to:

- 3.1 *Recognise and apply* professional conduct and ethical principles.
- 3.2 *Perform the administration and management* of a laboratory in terms of maintaining the quality process, Good Laboratory Practice, laboratory safety and the quality management system.
- 3.3 *Apply* basic scientific principles and academic knowledge.
- 3.4 *Perform* laboratory methods in accordance with standard operating procedures and the interpretation of results relevant to a laboratory diagnostic environment.
- 3.5 *Define and apply* research principles, compile a scientific report and present the findings. (Use of database/s and apply bioinformatics).

4. DISCIPLINE-SPECIFIC LEARNING OUTCOMES

Internship determines the overall competency by assessing all the specific learning outcomes. These include:

4.1 Professional Conduct and Ethical rules

At the end of this component, you will be able to:

- 4.1.1 *State and apply* the HPCSA Guidelines on Ethical Rules (version available from the HPCSA website – Booklets 1 to 11) <https://www.hpcsa.co.za/Conduct/Ethics>.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

- 4.1.2 *State and apply* the Occupational Health and Safety Act, Compensation for Occupational Injuries and Diseases Act, National Health Act including the regulations of the HPCSA, Labour Relations Act especially the aspects regarding HIV/AIDS and the Human Tissue Act.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

- 4.1.3 *State and apply* the general guidelines for health researchers and Biotechnology research in South African dealing with patients and patient samples (version available from the HPCSA website – Booklets 13 and 14).

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

- 4.1.4 Please include any other guidelines/rules specific to your professional category

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.2 Good Laboratory Practice (GLP) and Laboratory Safety

At the end of this component, you will be able to:

- 4.2.1 *Define and practice the correct* use of personal protective equipment (PPE).

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

- 4.2.2 *Define and practice the safe* handling, storage and disposal of biological specimens.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.2.3 *Define and practice the safe handling, storage and disposal of chemicals (including radioactive materials where applicable).*

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.2.4 *Identify and practise the managing of chemical and biological spills (including radioactive materials where applicable).*

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.2.5 *Identify fire hazards and perform safety drills.*

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.2.6 *Identify and locate physical and ergonomic hazards.*

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.2.7 *Record and operate in the safe handling, service and maintenance of equipment.*

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.2.8 *List and demonstrate exposure to laboratory management and administration in a diagnostic environment.*

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.3 Quality Management

At the end of this component, you will be able to:

4.3.1 *Relate to and participate in the laboratory accreditation and audits.*

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.3.2 *Participate in internal and external quality assurance programs.*

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.3.3 *Perform* validation of diagnostic test methods / platforms / kits.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.3.4 *List and apply the* Standard Operation Procedures (SOP's) and guidelines.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.3.5 *Record and perform* the operation and maintenance of laboratory equipment.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.3.6 *Recognise and conclude the* identification and resolution of non-conformances.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.4 Scientific and Discipline-Specific Knowledge

At the end of this component, you would have obtained the necessary academic knowledge to understand a diagnostic result in a health care facility:

4.4.1 *List* of appropriate textbooks used.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.4.2 *List* of Journal clubs attended and presented.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.4.3 *List* the lectures / seminars / workshops / conferences / courses attended and presented.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.4.4 *List* the assignments / case studies completed.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.5 Competency Training

At the end of this component, you will be able to integrate practical competencies and academic knowledge to interpret and provide a patient report:

4.5.1 List all practical competencies performed (including competency levels).

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.5.2 *Describe* the principles of the test methods and apply the most appropriate test method based on patient history and clinical information.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.5.3 *Perform the troubleshooting* of test methods.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.5.4 *Describe* the limitations of the various test methods performed (e.g. sensitivity and specificity, positive predictive value (PPV) and negative predictive value (NPV)).

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.5.5 Interpret a finding in clinical practice and result reporting.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.6 Principles of Research

At the end of this component, you will be able to write a scientific publication:

4.6.1 Develop a protocol and apply appropriate published literature (literature review), in your research study.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.6.2 *Apply* research ethics, in your research study.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.6.3 Identify plagiarism, in the developing of your protocol and scientific report.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.6.4 *Apply for funding and compile a budget, for performing your project.*

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.6.5 *Select and apply biostatistics and / or databases (if applicable), in interpretation of your results/research.*

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.6.6 Compile a scientific report to be prepared in the following format:
Abstract (250-300 words), Introduction, Methods, Results, Discussion, Conclusion, References.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

4.6.7 Present your research findings by using a Power Point presentation.

Assessment: Please indicate method of assessment and frequency (refers to The National Curriculum for minimum standard)

5. THE ROTATION ROSTER

A schedule or planning roster (over the 24-month period) has to be included in the training program including all the various components of the program (please specify each component) with a period, supervisor and specific laboratory.

6. THE PORTFOLIO OF EVIDENCE

Formal evidence-based continuous assessments must be performed on all components of the training program over the 24-month period.

The evidence of these components shall be used in a structured manner to compile your Portfolio of Evidence.

This is an evidence-based document and will not be accepted without original signatures and dates of each assessment.

The Guideline for Submission and Assessment of the Portfolio of Evidence (CMS 02) prescribe the components and structure of the self-assessment and must be completed by the intern candidate, supervisor and head of training program.

7. THE FACILITY-BASED EXIT ASSESSMENT

A formal outcome-based assessment will be conducted by the training department to ensure that the candidate has acquired the necessary skills, academic knowledge and practical competencies outlined in the syllabus. Prescribe the format of the assessment and assessors.

Refer to Policy regarding the training of Intern Medical Scientists (CMS A) for a definition of this examination.

The Intern Duty certificate contained in this document shall be completed by the head of the training program and formally approved by the head of the training facility before the Portfolio of Evidence may be submitted to the HPCSA.

8. OUTCOME ASSESSMENT BY A PRESCRIBED BOARD-APPROVED COMPETENCY-BASED ASSESSMENT

This Portfolio of Evidence serves as a Board-approved competency-based examination.

The assessment of the Portfolio of Evidence is outcome-based and will rely on the original evidence presented and the completed Guideline for the Submission and Assessment of the Portfolio of Evidence (CMS 02 MBS).

Refer to Guidelines on Assessment and Moderation of the Portfolio of Evidence: Intern Medical Scientists (CMS H) and Policy regarding the Training of Intern Medical Scientists (CMS A) for a detailed process on the assessment.