



UNIVERSITY OF ZULULAND

POLICY AND PROCEDURES

on

RESEARCH INSTRUMENTATION

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OVERSEEING COMMITTEE(S)		RESEARCH → SENATE → COUNCIL	
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POLICY STATEMENT

This policy outlines the objective, the underlying principles and procedures on research instrumentation, as well as the implementation and review processes of the policy across research units and faculties – to support alignment of research instrumentation processes – with the research strategy of the institution.

REVISION HISTORY

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RELATED POLICIES	
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	RESEARCH STRATEGY
	RESEARCH POLICY

TABLE OF CONTENTS

SECTION A	4
1. INTRODUCTION	4
2. OBJECTIVE/S	4
3. SCOPE	4
4. DEFINITIONS	5
4.1 Central Analytical Laboratory (CAL).....	5
4.2 Research Instrument.....	5
4.3 Advisory Board	5
4.4 Strategic Alignment.....	5
5. PRINCIPLES	6
5.1 Ownership.....	6
5.2 Responsibility and Governance.....	6
5.3 Access.....	6
5.4 Training.....	6
5.5 Certification	7
5.6 Health and Safety Regulations	7
5.7 Acquisition.....	7
5.8 Governance	8
6. POLICY PROVISIONS	8
Equipment Maintenance Financing.....	9
6.1 Internal use charges / maintenance account.....	9
6.2 External usage	9
6.3 Teaching	10
6.4 Equipment productivity:.....	10
SECTION B: PROCEDURE	11
7 REVIEW OF THIS POLICY	11
8 IMPLEMENTATION AND OVERSIGHT	11

SECTION A

1. INTRODUCTION

Research instruments are the necessary, facilities to support the state of the art research at appropriate quality within respective disciplines and research niche areas. However, they are fittingly costly, often valued at millions of Rand. To expand, or even to maintain such sophisticated instrumentation suite requires cooperation across Faculties, Departments, Centres and Institutes, a commitment to sharing these resources and a long-term financial and maintenance plan.

The need to structure, manage where needed and to regulate the acquisition, usage, maintenance as well as the certification of analyses done are all critical elements of a research instrumentation process.

This policy outlines the objective, the underlying principles and procedures on research instrumentation, as well as the implementation across research units and faculties, and a review processes of the policy.

2. OBJECTIVE/S

In alignment with the institutional strategic research objectives, the objective of this policy is to outline the principles, processes and guidelines for the management of research instrumentation within and across research units, faculties and the University at large.

The overall aim is to support alignment of research instrumentation processes – with the research strategy of the institution.

3. SCOPE

Research instruments will be managed largely on two levels, namely:

- Within individual departments
- Through a Central Analytical Laboratories

Overall, this policy applies to all individual or groups working with (and responsible for the management and maintenance of) research instruments, be it an authorized individual in a full-time or part-time capacity, be it in a scholarship, fellowship, or any

collaborative capacity at or with – the University of Zululand research units within and across all academic departments, faculties and research centres.

4. DEFINITIONS

4.1 Central Analytical Laboratory (CAL)

This refers to a specialised scientific operational space where specific research processes, including explorations and experimentations are conducted. This is usually the space where an instrumentation apparatus is located within a research centre, research centre or department.

4.2 Research Instrument

This refers to a specialized technical apparatus or machinery used for applied scientific research, for developments, experimentation and testing of related innovations.

4.3 Advisory Board

In a research instrument hosting structure and arrangement, this refers to a body nominated by a responsible unit to advise, steer and guide the management of the acquisition, maintenance, usage and management of a research environment and a related research instrument.

Whilst appropriately knowledgeable individuals should make up the board, the actual composition and meeting frequency of the advisory board is usually determined through internal arrangements.

4.4 Strategic Alignment

Strategic alignment would imply a clear linkage between a particular research programme and the research strategy of the institution.

Often Research Niche Areas exemplify research focus areas that is defined to further institutional research objectives as outlined in institutional research strategies.

As opposed to haphazard research activities with no link to any institutional direction, strategic alignment refers to research that is planned to further one or more aspects of the institutional research strategy.

5. PRINCIPLES

5.1 Ownership

All instrumentation housed in a university facility belongs to the university and is listed on the University inventory.

One reason is that if the equipment is damaged (e.g. by fire or water, or even by misuse in some circumstances) then it is covered by the University insurance.

5.2 Responsibility and Governance

All major instruments must have a faculty / departmental member / technician designated as ultimately responsible for overseeing and maintaining the equipment. If the instrument is part of a larger facility / laboratory such as the Central Analytic Laboratory (CAL), then the responsibility falls on the Director.

Depending on the scale of the CAL a larger group of researches should be appointed / elected to act as an advisory board. Senior-level technician(s), researchers may be in charge of the day-to-day operation/ maintenance but ultimately the Director of the CAL must be responsible.

5.3 Access

University research equipment must be made available to other researchers on campus on a “first come, first served” basis. This does **not** mean that anyone can use any instrument at any time, but there has to be access to staff or students who are capable of operating the equipment responsibly. Allowing externally based users would be considered in such a way that it doesn't clash with internally arranged needs. A fees structure for such usage must be developed

5.4 Training

To facilitate broad access, there needs to be a mechanism in place to train potential users, either via an appropriate for-credit undergraduate or graduate course if the instrument warrants such in-depth treatment, or via smaller, focused workshops, or simply hands on training by the responsible technician / staff member. More users mean more maintenance and a continuing need to upgrade and replace the instrument.

5.5 Certification

All tests and analyses should adhere to national and international standards. In the case of a Central Analytical Laboratory facility certification must be done and a certificate must be issued stating very clearly the level(s) of certification.

5.6 Health and Safety Regulations

Health and safety provisions must be put in place in compliance with University policy and best practises. The keeping of laboratory workbooks must be mandatory and such a document(s) must be kept and preserved as per international standards.

5.7 Acquisition

The purchasing / acquisition of new equipment must be based in a number of strategic principles, such as:

- 5.7.1 Support for both undergraduate and postgraduate curricula, teaching, learning, research and community engagement
- 5.7.2 Alignment with existing research strengths, research foci in the University for example the Research Niche Areas
- 5.7.3 Alignment with existing research strengths, research foci in the University for example the Research Niche Areas
- 5.7.4 Sharing of instruments, internally and externally, as far as possible
- 5.7.5 A maintenance and a business plan must be developed to ensure longevity, upgrading and maintenance
- 5.7.6 Installing costs and institutional support from the DVC: IS, such as funding for security, location etc.
- 5.7.7 A discussion must be held with the DVC: IS prior to the submission of the proposal. This is crucial for budgetary purposes as well as for a cost analysis regarding installation and maintenance cost post the contractual period

5.8 Governance

- 5.8.1 A Faculty structure must be put in place such as a Centre Analytical Laboratory (CAL) Executive Committee.
- 5.8.2 The CAL must be managed by a Director.
- 5.8.3 The Director must facilitate the assessing of all applications and ensure that proper alignment with National and International certification standard and protocols are adhere to and that the Faculty and University's strategic teaching, learning, research and community engagement objectives are enhanced.
- 5.8.4 Such a body shall ensure that proper standards are maintained, e.g. health and safety, etc.

6. POLICY PROVISIONS

Instrumentation funding organisations such as the NRF and many other agencies (including the University) require that a maintenance plan to be included in the equipment proposal.

Therefore, the responsible faculty member / technician must prove that all major instruments shall be properly maintained, and that appropriate accounts are created and monitored.

Equipment Maintenance Financing

6.1 Internal use charges / maintenance account

- 6.1.1 All major research instruments shall have a use charge that feeds into a maintenance account.
- 6.1.2 All users of the instrument are to include use charges in their research proposals in order to keep the maintenance account viable.
- 6.1.3 Benchmarking must determine such rates which may depend on the value of the instrument, but charges should be sufficient to cover any service contract from the manufacturer if such is available (typically valued at 10% of the initial purchase price) plus the support of any technician / researcher with the responsibility for servicing / maintaining the instrument.
- 6.1.4 This policy does not mean that researchers cannot use the instrument if they have no money. Arrangements can always be made to help new researchers to get data for their first research proposals.
- 6.1.5 There can also be arrangements such that, if all the grant allotment is spent, a regular user can still get access to the facility, assuming the budget was reasonable in the first place.
- 6.1.6 In the end, maintenance costs have to be covered.
- 6.1.7 When there are special maintenance needs (beyond routine air handling, heating, cooling, electric supply etc.) they are the responsibility of the research unit.
- 6.1.8 The CAL Director shall build the cost of repair and/or replacement into their maintenance and reserve accounts.

6.2 External usage

- 6.2.1 The NRF requirement is that external use of the instrument should be encouraged, hence their policy on regional partnerships.
- 6.2.2 Users from outside may buy time on instrumentation at a significantly higher rate than internally based users.
- 6.2.3 External collaborators rates should or maybe the same with that of the University but higher for non-collaborators i.e. those sending only samples for analysis

6.3 Teaching

6.3.1 Research instrumentation should always be considered for use in training/teaching where relevant and, as instrumentation becomes obsolescent, it can be moved to designated teaching labs.

6.4 Equipment productivity:

6.4.1 Equipment productivity should be accounted for especially in terms of publications annually or length of time indicated by the University.

6.4.2 This is to make sure that Researchers do not just machines but productive ones

SECTION B: PROCEDURE

7 REVIEW OF THIS POLICY

7.1 The Deputy Vice Chancellor, Research and Innovation or his/her nominee shall review this policy on a three year cycle.

8 IMPLEMENTATION AND OVERSIGHT

8.1 The project owner of this policy is the Deputy Vice Chancellor, Research and Innovation, who is to ensure that it is implemented across relevant faculties and research units across the university, and that it is presented for revision and review at appropriate times.

8.2 Nothing in this clause shall prevent Council from reviewing this policy at any time prior to the stipulated five-year cycle, in which event a new cycle shall commence from the date of such review.