



Vaal University of Technology
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RESEARCH POLICY



VAAL UNIVERSITY OF TECHNOLOGY

Owner: Dean: Research

1. Policy approved in 2006
2. Revised policy approved by Senate, 3 March 2006
3. Appendix C approved by Senate, 17 November 2006

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VAAL UNIVERSITY OF TECHNOLOGY RESEARCH POLICY

1. GENERAL RESEARCH OVERVIEW

1.1. Introduction

Research and its supporting activities form important and integral facets of tertiary education. The Vaal University of Technology accepts its premise, and research together with education and community service, is seen as being one of the University's primary functions.

Although research in itself is important, the aforementioned three functions are as such interdependent and complementary to one another so that one has to continually realise the relative importance of each.

1.2. Definition

Research in this context includes those activities intended to produce one or more research outcomes, including the creation of knowledge, reorganisation, and application of knowledge.

The preparation and publication of research findings and the reading of research papers at specialist conferences and seminars are included, depending on the primary purpose for which the research is undertaken; the following cases may be distinguished:

- Research which is undertaken primarily as an academic/instructional activity where a staff member could act as promoter/co-promoter/supervisor of, for example, MTech and DTech Degree students.
- Research which is undertaken by staff members primarily in order to obtain further academic qualifications.
- Research and development which is undertaken on a consultation or contractual basis.
- Research and development conducted for the express purpose of producing research outcomes (and not primarily for one of the above reasons). Activities carried out with University funds or in terms of agreements with external agencies, such as the National Research Foundation (NRF), are included.

1.3. Categories of Research

Depending on the objectives of the research, the following distinctions can be made:

Basic Research is a creative and systematic investigation conducted primarily with the aim of increasing knowledge. Basic research thus aims at the solution or explanation of problems integral to the fields of knowledge, the exposure of new fields of research or the expansion of knowledge.

Applied Research is a creative and systematic investigation performed to increase knowledge, but the

primary aim of devising specific practical applications. The practical aim of applied research may be

to:

- determine possible uses of basic research, or
- determine new methods of achieving specific and predetermined aims.

Developmental Research is the systematic activity involved in the utilisation of existing knowledge gained from research and/or practical experience, in order to design, evaluate, and adapt services, processes, systems, materials, products or devices, with a view to the implementation and/or manufacture; or to substantially improve existing ones. Development is directed towards bringing about new applications of knowledge and adapting and improving existing human and natural science technology, whether of a local or foreign origin.

1.4. Research at the Vaal University of Technology

Although basic, applied (problem-solving) and developmental research are not always seen in isolation, the Vaal University of Technology wishes to actively promote **Applied** and **Developmental Research** by:

- creating a relevant research culture,
- promoting research outputs,
- increasing funds available for research,
- continually reviewing its research policy,
- recognising research performance, and
- efficiently managing research.

1.5. Management of Research

The active management of research at the Vaal University of Technology occurs at **Faculty level** where the expertise in specific fields/areas lies.

The role of the University Management is that of encouraging and supporting research by:

- creating an environment that contributes towards effective research aimed at developing research skills and competence amongst students and staff: these important aspects of personal development should also have a positive effect on the quality of education,
- providing grants and incentives to help finance research costs of deserving research projects through the **University's Central Research Committee**, and
- allocating research funds to individual researchers/faculties/departments
- motivating involvement and participation of faculties, departments and staff in activities and programmes of the NRF or any other external organisation.

1.6. Research Output

Research output could be in the form of:

- original research articles and review articles which appear in an approved journal for the subject specialist, as specified by the Department of Education for subsidy purposes,
- books and chapters in books for the subject specialist (including conference proceeding, dissertations, theses and reports on contract research conforming to the definition of research above),
- patents,
- artefacts, this also includes processes and engineering models/prototypes,
- unique and new products e.g. for food industry or software or visual arts and design,
- outputs not recognised as accredited by Department of Education to be evaluated in terms of peer evaluation informed by Research Policy and other documents adopted by Vaal University of Technology.

2. RESEARCH OBJECTIVES

The following research objectives have been defined:

- 2.1. To promote all facets of research that benefit teaching and learning, the community and both the private and public sectors of the country.
- 2.2. The intellectual development of students/researchers, for them to be able to synthesise i.e. act in
a seriously thoughtful substantiated/responsible, creative and problem-solving way.
- 2.3. To promote the development of a research culture: supporting staff and students in stimulating research and in so doing, effect a scientifically distinguished research environment.
- 2.4. To create an enabling environment to promote research this includes establishing infrastructure.

- 2.5. To obtain financial support from institutions such as the NRF, DTI and other sources, including the private and public sectors.
- 2.6. To promote co-operation with trade and industry with regard to research and co-operative projects as well as to engage in contract research.
- 2.7. To provide required research related services and liaison at a local, national and international level.
- 2.8. To meet the University's social obligation through:
 - development of advanced skills and knowledge of human capital,
 - research that contributes to general economic development,
 - the development of technology that benefits the community,
 - the improvement of the environment, e.g. research related to pollution, and
 - projects aimed at uplifting milieu-deprived communities.

3. RESEARCH POLICY

- 3.1. Apart from their lecturing duties academic staff are expected to actively engage in research.
- 3.2. Research and lecturing responsibilities complement each other. A lecturer's knowledge of, and skill in his/her subject, is promoted and expanded by means of research. This research is determined by needs which will lead to enhanced quality with regard to the training of high-level manpower and the application of knowledge and expertise to the benefit of the community.
- 3.3. The University does not prescribe the nature of the research, although attention should particularly be given to relevant applied, problem-solving and development aspects of research.
- 3.4. Research projects may be undertaken by individuals or groups of individuals. Well co-ordinated projects by specialised researchers in multi-disciplinary teams, must generate optimal results in selected areas of skill. Integration with research networks is promoted.
- 3.5. Staff are expected to strive towards meeting approved national and international standards as determined by publication of accredited outputs, patents, artefacts and peer evaluation.
- 3.6. Academic departments should encourage students to further their studies and to become involved in the existing research projects.
- 3.7. National and International contact should be actively encouraged, especially regular contact with experts conducting research in the same field. Collaborative and cross-national research with international experts within a field should be encouraged.
- 3.8. The necessary information sources supporting research (data bases, books and magazines) and the relevant library and information services, should be provided.

4. THE CENTRAL RESEARCH COMMITTEE

The main function of the Central Research Committee (CRC) is to initiate, co-ordinate and evaluate research, assist with infrastructure as well as to encourage the publication of results in accredited sources. The committee must ensure that the highest standards are maintained.

The research regulations of the Central Research Committee - *See Appendix B*

5. FACULTY/DEPARTMENTAL RESEARCH COMMITTEE

Research within faculties is managed by a faculty research committee or a departmental research committee in the case of the non-academic sector of the University. The objective of this research committee is to support research at faculty/departmental level.

The regulations of the Faculty / Departmental Research Committee – *See Appendix A*

6. RESEARCH CULTURE

Research is promoted by improving its quality and extent. A research culture will have full effect only should growth areas be identified and staff be encouraged by the necessary recognition, motivation and attitude of management, and not by compulsory participation in research.

The following resources support the development of research:

- 6.1. Funding to promote this culture.
- 6.2. Courses in research methodology, information retrieval, lay-out of reports, compilation of articles etc., in order to improve the quality of research outputs.
- 6.3. Promotion and advocacy related to research e.g. recognition and rewarding of research outputs, encouragement to attend symposia, as well as visits to research institutions.
- 6.4. Where possible easing of the lecturer's teaching, invigilation and administration obligations for the duration of a research project.
- 6.5. Ensuring new appointments have a research-orientated approach.
- 6.6. Involvement of staff within approved research focus areas.
- 6.7. Staff development by providing them with opportunities for the acquisition of new research skills.
- 6.8. Expanding the library's literature on research.

- 6.9. Training of staff, project mentors/promoters/supervisors to ensure quality of student research outputs.
- 6.10. Sabbatical leave for research purposes.
- 6.11. Keeping a register of all research undertaken by the University.
- 6.12. Joint research projects with other institutions and specialists.
- 6.13. Maintaining research related databases e.g. equipment.
- 6.14. Infrastructure is available to support post-graduate students e.g. Post-graduate Centre

7. EVALUATION OF RESEARCH

The following parameters are used to measure the quality of staff research.

- 7.1. The number and level of staff who are receiving external funding for research.
- 7.2. The competence of staff members themselves in terms of their qualifications.
- 7.3. Research outputs measured against the national benchmark of 0.5 publications per staff member per year.
- 7.4. Staff's involvement as external examiners, consultative, editorial committees, reviewers (e.g. NRF). Peer evaluation and recognition, both nationally and internationally.
- 7.5. Staff members are leaders of inter - institutional research projects.

8. FUNDING OF RESEARCH

- 8.1. The Vaal University of Technology will annually allocate funds for research and development. These funds will be utilised according to financial procedures and guidelines.
- 8.2. Research funds could be raised from the private and public sectors.
- 8.3. Awards and grants will be made available for post-graduate students.
- 8.4. Post-doctoral research fellows may apply for funding for research projects and presentation of papers at conferences. Application forms have to be completed and must follow the same procedures as applications submitted by permanent members of staff.
- 8.5. Students involved in research projects will not be funded via the Central Research Committee to attend conferences.

VAAL UNIVERSITY OF TECHNOLOGY RESEARCH CODE OF ETHICS

1. Preamble

The research code of the Vaal University of Technology gives expression to the standards and values that apply in the Vaal University of Technology and to which all Vaal University of Technology researchers commit themselves in their research.

The Vaal University of Technology undertakes and promotes research in order to find workable solutions to problems and thus to help establish a just and healthy working society. In the execution of this task the Vaal University of Technology strives for the fair distribution and responsible utilisation of the resources and benefits of its research and its other research-based services in the interests of South African society as a whole. The Vaal University of Technology thus endeavours to conduct research

- with scientific integrity and excellence, but also
- with a sense of social sensitivity and responsibility, and at all times
- with due regard for the dignity and individual basic human rights.

In the pursuit of this ideal the Vaal University of Technology subscribes to the principles of scientific responsibility and critical involvement, integrity and honesty, of human dignity and of academic freedom. These principles should always be understood in terms of their interrelationship and mutual coherence. In the research context these principles find expression in the relationship between the researcher and

- the research community,
- society,
- the participants in the research, and
- the sponsors/clients in research.

2. The researcher and the research community

The Vaal University of Technology requires all researchers to maintain the highest ethical and safety standards particularly when human and animal subjects are involved.

2.1. Research is carried out in a scientifically responsible manner at all times. The researcher (research team) accepts responsibility for the design, methodology and execution of the research; plans the study in such a way as to optimal the validity of the findings; reports the limitations of the findings and indicates where applicable, possible alternative interpretations.

- 2.2. The right of fellow researchers to select from a variety of paradigms, methods and techniques is acknowledged.
- 2.3. In the communication of their findings, researchers subscribe to the principles of honesty, comprehensiveness and exposure to public scrutiny.
- 2.4. The authority of the professional codes of specific disciplines is recognised and honoured.

2.5. Researchers may not misuse their positions as researchers for personal gain e.g. use student

ideas and patent as your own idea.

2.6. That the researcher/research team gives due acknowledgement (financial or resource support) to the Vaal University of Technology in any of its reports, publications or visual presentations.

3. The Vaal University of Technology and society

3.1. The Vaal University of Technology through its researchers is committed to conduct research that will contribute to the welfare and quality of life of all South Africans.

3.2. The Vaal University of Technology through its researchers is sensitive to all forms of inequality and injustice in society and, through its research and other forms of service; attempts to contribute to the improvement of the less advantaged and deprived South Africans.

3.3. The Vaal University of Technology recognises the rights and freedom to have access to research findings and information and always acknowledge the individual; however the individual and other institution's rights will be protected according to the South African Constitution.

4. The researcher and participants in the research process

4.1. In the planning and execution of a study, the researcher always takes into consideration the ethical acceptability and the foreseeable consequences of the research.

4.2. Should conflict arise between the interests of the researcher and the interests of individual participants, the principle holds that the interests of the latter take precedence. The researcher should be constantly aware that the research may prejudice the situation and position of the research participant. Research and the pursuit of knowledge should never be regarded as the supreme goal at the expense of other personal, social and cultural values.

- 4.3. Before participation in research is requested, a clear and fair agreement is reached with the participants. Where appropriate, the researcher informs participants about all aspects of the research – including its aims and implications – which might reasonably be expected to influence their willingness to participate. The researcher takes care at all times to obtain the informed consent of the participants.
- 4.4. The researcher respects the right of individuals to refuse to participate in research, and to withdraw their participation at any stage.
- 4.5. The researcher protects participants against foreseeable physical, psychological or social harm or suffering that might be experienced in the course of, or as a result of the research. The researcher is particularly concerned about the rights or interests of more vulnerable participants, such as children and the aged. When there is a risk of harm the participants or their guardians are duly informed beforehand. When research has unforeseen and undesirable consequences, the researcher is responsible for identifying, and where possible, for undoing these consequences.
- 4.6. Information obtained in the course of research that may reveal the identity of a participant is treated as confidential unless the participant agrees to its release.

5. The researcher and the sponsor/clients of research

- 5.1 Research that is undertaken on behalf of sponsors or clients is subject to the usual conventions of contract research. These conventions include the following:

- The researcher has the right to receive an explicit research mandate from the sponsor/client in which the conditions and terms of the research or service (research problems, time framework, etc.) are set out clearly.
- After acceptance of the commission, an explicit agreement or contract between the researcher(s) and client/sponsor should be drawn up.
- The researcher accepts that the sponsor or client has the right to request information on the execution of the research or service from the researcher at any stage in the course of the research. However, interference by sponsors or clients that may jeopardise the scientific integrity of the study or prejudice the interest of the participants in the research, is unacceptable.

- 5.2. Information that may reveal the identity of individual participants in the research will not be supplied to the sponsors or clients of the research, except with the written permission of such participants.
- 5.3. If the client or sponsor requests confidentiality in the reporting of research results, the researcher should consider the request in the light of all the principles contained in the research code. The researcher should negotiate the possibility of publication of findings in scientific journals with the sponsors or clients of the research even if such publication should occur after a period of embargo. In certain cases the researcher might even determine that the confidentiality of the findings is essential to protect the interests of the participants in the research.
- 5.4. The Vaal University of Technology will not conduct research on behalf of secret organisations or organisation which cannot account for the application of a particular outcome of research.

6. Postscript

Individual researchers must at all times accept ethical, social and scientific responsibility for the research they conduct or manage. All researchers should evaluate the potential impact of their research on the environment, and declare that possible impact, however unlikely.

Faculty Research Committees are responsible for ensuring that where necessary ethics clearance is obtained for a research project.

The Executive Committee of the Central Research Committee constitutes the Ethics Committee with the powers to co-opt specialists according to the research project.

The University of the Witwatersrand Medical Ethics Committee is utilised where health or nutrition related research is undertaken.

VAAL UNIVERSITY OF TECHNOLOGY POLICY ON INTELLECTUAL PROPERTY

1. Introduction

Applied research and development often results in technological progress as manifesting itself in inventions or designs. Such progress is of great importance to economic advancement and improvement of the quality of life. Normally, use or exploitation of such technological progress, is limited to the creator or this person's nominee through appropriate protection so as to ensure that all accruable rights are properly protected.

In order to qualify for patent protection, an invention must be of a technical character, be novel and inventive and be able to find application in trade, industry or agriculture, while a functional design must be novel, not commonplace and be intended for industrial multiplication.

Prospective inventors or designers should guard against disclosure of the appropriate creation prior to lodging an application for its protection. Members of the University staff are thus advised to make the desired enquiries before any action is taken.

2. General Policy Principles

The policy will at all times recognise and apply the national laws on intellectual property and protection thereof.

The University undertakes to:

- 2.1 promote, encourage and support all activities within the University that can result in patents, functional designs or related protection.
- 2.2 co-operate with all parties having an interest in appropriate creations, which would result in benefit for such parties and the University.
- 2.3 establish effective mechanisms and procedures towards obtaining appropriate protection, and

- 2.4 ensure a fair distribution of financial benefit which may accrue for the rights obtained under the appropriate creation.

3. Assessment

The Dean: Technology Transfer and Innovation will consider, advise and decide on all matters relating to the appropriate type of protection (where necessary an assessment committee can be established according to the project). All subject matter disclosed will be treated as confidential. The Dean: Technology Transfer and Innovation will report to the Central Research Committee.

The Dean: Technology Transfer and Innovation/assessment committee will:

- 3.1 evaluate appropriate creations as regards to their practical and commercial value, and keep a register of all patents and projects,
- 3.2 establish whether an invention or design would qualify for financial assistance,
- 3.3 provide advice regarding the feasibility, operational processes and marketability of an invention or functional design,
- 3.4 advise to the extent of the University's involvement in the registration and exploitation of an appropriate creation,
- 3.5 notify staff in writing within three months from the date of submission by the creator of the University's decision, and
- 3.6 assist staff with formal agreements, including those relating to confidentiality and any arrangements with external parties.

4. Inventions by members of staff

- 4.1 According to established legal principle rights ensuing from inventions or designs created by members of the staff of the University within their course of employment, accrue to the University. The University will in this regard consider any submissions and advise the University (Executive Management Committee) in relation to an appropriate decision.
- 4.2 If an invention or a functional design is found to be outside the course of employment, the University can still claim compensation in cases where equipment and/or other resources of the University were used.
- 4.3 Once an appropriate creation is made in which the University may claim an interest, a member of staff can:
 - 4.3.1 in the case of an invention, attend to lodging of a provisional patent application under the person's own name, while thereafter providing relevant patent documentation to the committee, or
 - 4.3.2 request the committee to arrange for the filing of a provisional patent application while furnishing it with appropriate documentation,
 - 4.3.3 in the case of a functional design, attend to lodging of a design application under the person's own name, while thereafter providing relevant documentation to the committee, or
 - 4.3.4 request the committee to arrange for the filing of a design application while furnishing it with appropriate documentation.

In any of the above cases where appropriate documentation is supplied to the committee, it must be accompanied by the recommendation by the Dean or Director concerned.

- 4.4 If deemed necessary, the committee will appoint an appropriately qualified professional person to attend to aspects relating to obtaining protection or other related aspects.

4.5 Any financial benefits which may arise from the commercialisation of inventions or designs in which the University has an interest, will be distributed as follows (after all costs incurred by the University have been deducted):

Inventor	80%
University	10%
Department/Unit	10%

Costs and expenses incurred by the University will be deducted first before financial benefits are distributed.

4.6 In the case where the University has an interest, members of the staff may request the assessment committee to assist with appropriate searches, exploitation and further development of the creation. Any costs incurred by the University, will be dealt with as set out above.

4.7 All steps taken in pursuance of international protection will be carried by either the University or an institution or enterprise which is involved in commercialisation of the creation.

4.8 Creations by staff which also involve students, study leaders or promoters, will be handled on an ad hoc basis and in the light of the relative rights between the parties involved.

4.9 Any issue, principle or possibility regarding inventions or designs not stated in this document, will be handled on an ad hoc basis by the Dean: Technology Transfer and Innovation/relevant committee.

VAAL UNIVERSITY OF TECHNOLOGY POST-DOCTORAL FELLOWS POLICY

Post-doctoral fellows can be appointed if linked to an approved NRF Niche Area, University Focus Area, University Research Centre or Institute. These post-doctoral fellows need to add value to the University research objectives.

Applications have to be submitted to the Executive Committee of the Central Research Committee with the approval of the Dean of the Faculty. The amount available from the Central Research Committee will be limited. Therefore, NRF Niche Area leaders and/or University Focus Area leaders must seek funding from other sources in order to supplement costs involved.

Accommodation and travelling may be funded by the Executive Committee of the Central Research Committee. The amounts applied for must not exceed University policy limits.

Faculties or departments will be responsible for provision of normal staff requirements, office space, access to computer/internet, local travelling costs, stationery etc.

As stated under section 8 of the University Research Policy 'Post-doctoral Research fellows may apply

for funding for research projects and presentation of papers at conferences. Application forms have to

be completed and must follow the same procedures as applications submitted by permanent members

of staff'.



Vaal University of Technology

FACULTY/DEPARTMENTAL RESEARCH COMMITTEE

1. Composition

Any member of the academic staff with research expertise can serve on the committee. A member can be from any department i.e. even from another faculty. A minimum of four and a maximum of nine members are recommended. The committee can, from its own ranks, appoint a chairperson, a deputy chairperson and a secretary.

Examples:

Faculty Research Committee

Department/Bureau Research

Executive Dean

Director

Heads of Departments

Head of Department

Professors

Focus Area Leaders

Heads of Research Centres/Institutes

Researchers

Researchers

Research Advisors (Ad Hoc)

Research Advisors (Ad Hoc)

Dean of Research, ex officio

Dean of Research, ex officio

2. Functions

- Promotes research activities within the faculty.
- Assists staff and students with regard to procedures relating to research projects, proposals and examinations.
- Ensures that project proposals for funding are of a high standard.
- Assist with the development of an infrastructure for research.
- Encourages the publication of research results in DoE accredited journals.
- Awards internal faculty funds for research purposes,
- Evaluating projects before referring requests for funding.
- Monitoring reports of progress.

3. The Faculty Research Committee achieves these functions by:

- directing the attention of staff and students who are busy with advanced studies to the availability of research grants, bursaries and loans, both within and outside of the University,
- ensuring the accepted criteria for allocation of funds from the Central Research Committee as approved on 8 June 2000 are used as guidelines,
- directing the attention of staff to the research opportunities that are available,
- keeping a register / record of research projects/activities.



Vaal University of Technology

CENTRAL RESEARCH COMMITTEE

1. Composition

Dean of Research - Chairperson

Deputy Vice-Chancellors - Ex Officio

Executive Deans of Faculties

Registrar: Academic Support

Chairpersons of Faculty Research Committees and/or non-faculty Departments involved in research.

Specialist Advisers (Ad Hoc)

Representative – Library

Representative – Directorate for Institutional Development

Dean: Technology Transfer & Innovation

Representatives from each Institute/Centre

Four additional members may be co-opted with a maximum of one per faculty.

Director: Postgraduate Office

Executive Committee:

Deputy Vice-Chancellor Academic & Vice-Principal

Dean of Research

Executive Deans of Faculties

2. Functions

The main functions are to:

- promote research activities at the University by stimulating and co-ordinating.
- encourage the publication of research results generally accepted in publication forms including DoE accredited journals.
- make recommendations regarding requests for research funds and awards.
- promote co-operation and liaison with trade and industry and other bodies which conduct research.
- give advice on research projects.
- assess research reports.

3. The Research Committee achieves these functions by:

- providing inputs to the Executive Management Committee/Academic Board/Senate regarding research activities,
- awarding grants to staff from funds which are made available to the committee for research,
- ensuring the accepted criteria for allocation of funds from the Central Research Committee as approved on 8 June 2000 are used as guidelines,
- awards for presenting papers at national and international conferences, according to guidelines,
- awarding post-graduate student awards, and
- directing the attention of staff to co-operative research opportunities and external funds.

4. Meetings

- The committee meets at least once a semester.
- A quorum consists of half of the members, plus one.
- The normal rules pertaining to meetings, apply.

VAAL UNIVERSITY OF TECHNOLOGY RESEARCH EQUIPMENT POLICY ON AUDITS AND COMMUNAL USE

1. Preamble

The aim is to optimize access to research equipment and resources within the University to all researchers. The policies outlined below will facilitate both internal and external use of research equipment. They will provide mechanisms for controlling use and financing maintenance costs.

2. Equipment Audit and List

- 2.1. The Research Directorate sends out the request annually to all the faculty Research Officers/Deans/Chairpersons of Faculty Research Committees for a list of all research equipment housed within the Faculty.
- 2.2. The request is forwarded to all HoDs and Directors of institutes to compile/update a list of all research equipment under their control. The list will be made on the table provided by the Research Directorate. The table currently used is sufficient as it contains all the information regarding locality and costs for use.
- 2.3. The name and telephone extension number of the HoD is attached to each table.
- 2.4. A proper audit can also be done by taking a member of the audit department around to all the equipment as listed on the table above to verify all asset numbers and to make sure that the University assets, as far as research equipment is concerned, are properly recorded.
- 2.5 Where staff are aware of additional equipment they are expected to report this to the HoD and Research Directorate.

3. Interdepartmental use of equipment.

3.1. Potential users can contact the HoD of the department where the equipment is housed from the information available on the equipment list (2 above). The HoD can direct the user to the relevant staff member of the department that runs the equipment.

3.2 Payment can be facilitated by interdepartmental cost code transfers.

3.2. The HoD is responsible for coordinating the use of the equipment.

4. Maintenance costs

4.1. Maintenance costs are to be provided by the host department of the equipment, which can be budgeted for with funds applied for from the Central Research Committee.

4.1 The department hosting the equipment must draw up a budget for its running costs, maintenance costs and depreciation, and base its pricing for use accordingly.

4.2 Each researcher using a piece of equipment must budget (from his/her research funds from CRC/NRF/etc.) to meet the pricing referred to in 4.2. i.e. the hosting department recovers the costs from the equipment's use.

4.3 Funds derived from 4.3 will include users within the hosting department, interdepartmental transfers arising from the use by other departments and external users from outside the University (including contract work).

4.4 Each hosting department must strive to make each piece of equipment self supporting through external/other department use so as to reduce its dependency on the Central Research Committee budget.

5 Purchase of new expensive research equipment

5.1 Duplication of equipment on campus can be avoided by consulting the equipment list described in 2 above.

- 5.2 The purchase of new equipment must be motivated considering the internal need and projected external use.
- 5.3 Motivations for new equipment must include the impact on research outputs (papers, post graduates, etc.) for the University.
- 5.4 The costs of housing the equipment and providing the necessary human resources (e.g. expert technicians) must be considered when deciding to purchase new equipment.
- 5.5 The fulfillment of the requirements of clauses 5.2 – 5.4 must be weighed against each other in terms of long term financial viability of having the equipment.
- 5.6 It must be remembered that sometimes it may be cheaper to outsource services that could be rendered via the equipment internally. It is when the internal demand increases to the extent that it would be cheaper to have our own equipment that purchase is desirable – bearing in mind that external contract work relating to the equipment could improve viability.
- 5.7 Application for funds for research equipment can be made through the CRC, or any other external funding source. Alternatively, a department can purchase equipment through its own budgeted funds. In each case, due consideration to clauses 5.1 – 5.6 must be made.