

MSC NANOSCIENCE POSTGRADUATE PROGRAMME

Following on the success of new research centres in nanoscience and nanotechnology established by the Department of Science and Technology, the next major step was to introduce a dedicated postgraduate programme for training in nanoscience and nanotechnology. This programme also marks the introduction of a new system of collaboration between universities, where four South African universities are simultaneously presenting the same Masters degree.

From 2012 a Masters programme in nanoscience and nanotechnology has been offered



in collaboration with the University of Johannesburg (UJ), Nelson Mandela Metropolitan University (NMMU), the University of the Free State (UFS) and the University of the Western Cape (UWC).

Since the study of nanomaterials, nanoscience and nanotechnology exists at the overlap between biology, chemistry and physics, students from all these fields will register for the same degree - a new concept in advanced research in South Africa.

The programme comprises three aspects: Introductory courses in the wider aspects of nanoscience, courses in advanced nanoscience studies in the respective study fields, and a research thesis on a nano-study project.



The coursework component is completed at the University of the Western Cape, whereafter the students will continue their research projects at their home university campuses. Frequent movement between the different campuses is a feature of the programme.

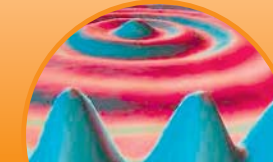
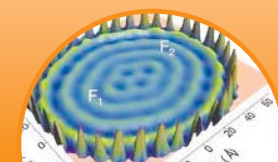
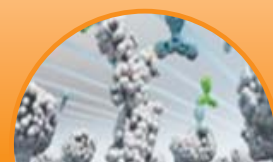
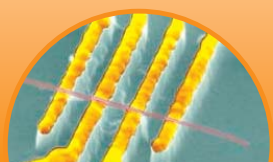
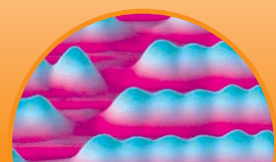
OUTLINE OF THE PROGRAMME

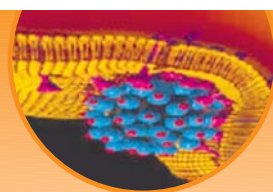
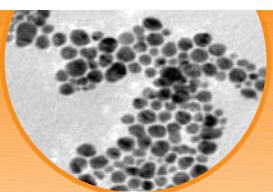
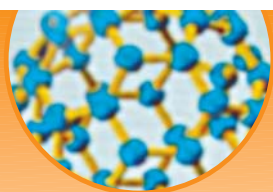
Each student takes two short courses to introduce them to nanoscience and nanotechnology, plus an introductory course in each of the two fields which differ from their own study field. For example: Chemistry students take two introductory courses, one in nanophysics and one in nanobiology. Students then proceed to advanced

courses in their own study field. For example: Chemistry students do advanced courses in nanochemistry. Although all the course components will be presented at UWC, lecturers from all four universities are participating in the courses. A number of international scholars are also contributing to the programme.

On completion of the coursework, the students return to their home campuses where they do a research project under a local supervisor, which culminates in a Masters thesis.

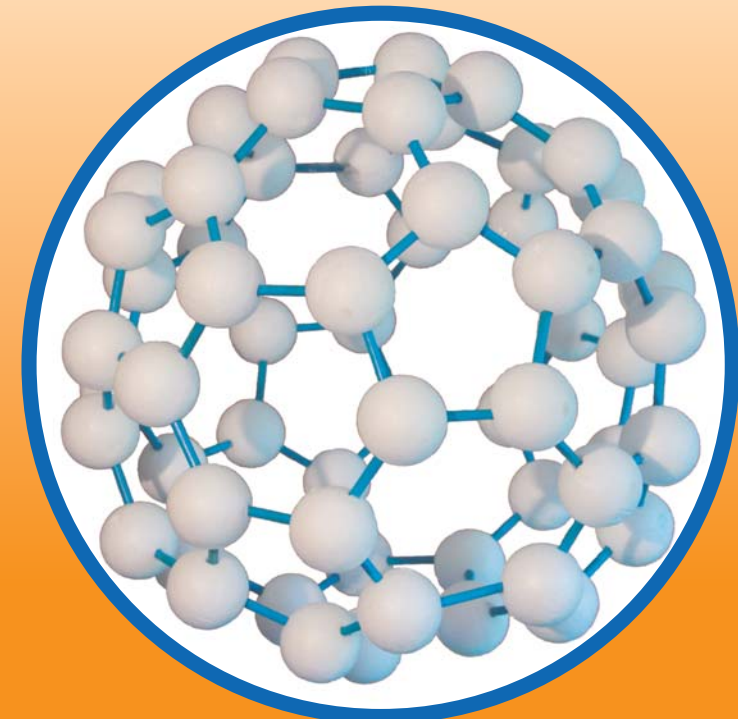
The duration of the course component is 9 months, followed by the research project for a minimum of 15 months at the home campus. Students will complete the MSc degree in Nanoscience in a minimum of 2 years.





NATIONAL NANOSCIENCE POSTGRADUATE TEACHING AND TRAINING PLATFORM

MSc NANOSCIENCE PROGRAMME



MODULES

Core Modules

- Central Concepts in Nanoscience
- Management for Nanoscientists

Nanochemistry Group

- Foundations of Nanophysics for non-physicists
- Foundations of Nanobiomedical Science for non-biologists
- Advanced Nanochemistry
- Experimental Techniques in Nanochemistry

Nanobiomedical Science Group

- Foundations of Nanophysics for non-physicists
- Foundations of Nanochemistry for non-chemists
- Advanced Nanobiomedical Science
- Experimental techniques in Nanobiomedical science



Nanophysics Group

- Foundations of Nanobiomedical Science for non-biologists
- Foundations of Nanochemistry for non-chemists
- Advanced Nanophysics
- Experimental Techniques in Nanophysics

DETAILS OF THE AWARD

A full scholarship is provided, which includes all registration, tuition and accommodation costs. An annual stipend to assist with personal costs is also provided, as well as an allowance to cover the purchase of books and a laptop.

ADMISSION CRITERIA

South African citizens with a BSc (Hons), B.Tech or equivalent degree and an average of 60% and above are welcome to apply.

For further information please contact the Administrative Hub at:

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