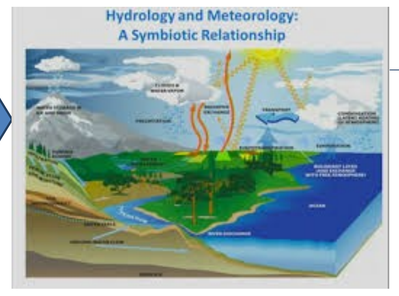
FACULTY OF SCIENCE & AGRICULTURE

Hydrology Department

Hydrology is the science that investigates the occurrence, distribution, movement and properties of the waters of the earth and their relationship with the environment within each phase of the hydrologic cycle.

The hydrologic cycle is a continuous process by which water is purified by evaporation and transported from the earth's surface (including the oceans) to the atmosphere and back to the land and oceans. All of the physical, chemical and biological processes involving water as it travels its various paths in the atmosphere, over and beneath the earth's surface and through growing plants, are of interest to those who study hydrology.



About us

The department comprises of 5 academic staff members, 1 post doc and 2 support staff. The department offers 3 years double major undergraduate degree, BSc honours, Masters, Doctorate and Postdoctoral studies in any water related field of studies.

Mission

Water is our most important natural resource. Without it, there would be no life on earth. The mission of the department is produce graduates with all the skills to Explore, Monitor, Analyse and, Manage our water resources.

Vision

Is to get the graduates into any water related sector obtain experience with the skills obtained from the academic environment

Staff Profile

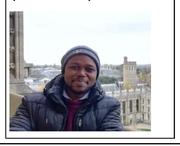
Mr B.K Rawlins (HOD)

Prof V Elumalai (Senior Lecturer)

Mr PO Ocholla (Lecturer)

Mr S.C Mazibuko (Lecturer)

Mr M.M Shabalala (Lecturer)



Mr DBX Makhathini (Laboratory Assistant)

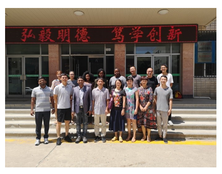
Mr. G Makweka Senior Technician

Workshops and Trainings

International Workshop on Groundwater Modelling (Sustainable water management for community development) was hosted by UNIZULU Hydrology Department funded by NRF held at Department of Hydrology (UNIZULU) from 22 August – 25 August 2016.

International workshop on Art Of Scientific Writing was hosted by UNIZULU Hydrology Department in collaboration with NRF and National Polytechnic Institute (IPN)Mexico held at Library Conference room (UNIZULU) from 09- 11 October 2018

UNIZULU student visit CHANGA'N UNIVERSITY, CHINA 2018/19 and CHANGA'N UNIVERSITY Researchers Visits UNIZULU in 2018/19



Rainwater Harvesting workshop hosted by UNIZULU Hydrology Department in collaboration with Lungelo Youth Development (LYD) held at Sitholinhlanhla Primary School on 18th September 2019

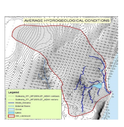
Workshop on Data Analysis in Hydrology using Python and Pandas was hosted by UNIZULU Hydrology Department in collaboration with IFS and NRF held at Hydrology Department (UNIZULU) from 21 – 24 October 2019

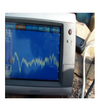
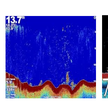
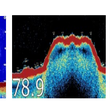
Rainwater Harvesting and Poultry rearing study and workshop organised by the Department of Hydrology (UNIZULU) and sponsored by Tendele Coal Mine company limited

Achievements in Research and Projects

Hydrology Department has been involved in numerous projects which involved student's participation to strengthen their practical relevance in the field of water resources. The Department is currently working on continuing with critical water resources themes and projects that for two decades have been housed within Hydrological Research Unit (HRU) founded in 1990 under the academic leadership of Emeritus Professor Brian Bruce Kelbe.

Mgobezeleni Linkages between hydrological and ecological drivers was one of the successful projects undertaken by the department forming part of WRC project (K5/2259/1/1) from 2011-2016. Total of 42 Honours students, 2 MSc and 2 PhD students graduated forming part of the project from the above mentioned period. Number of publications, Presentations and Symposiums formed were achieved as outputs of the project.



Rainwater harvesting Project (RWH) to promote the uptake of roof, runoff and groundwater harvesting for increased water access, small scale farming and groundwater storage in Somkhele, Mzingazi and Ntambanana in Zululand area. The project operations and capacity building was sponsored by IFS and Tendele Coal Mine company as part of community engagement project

Hydrocensus of Tana River systems, Environmental Flows and Social Ecological System in Kenya. Community participation workshops, four academic seminars, two peer referred conferences, 1 MSc and 1 PhD as well as 4 peer refereed Journal papers are the project Output. Carissa Water Resources Authority (GWRA) as collaborators are continuing to gain from the framework developed on how to balance sustainable livelihood and altered flows downstream of the dams.