

PERSONAL INFORMATION:

Last Name:	Kemp
Full Names:	<u>Marthie</u> , Elizabeth
Date of Birth:	2 September 1975

CONTACT INFORMATION:

E-mail:	kempm@ufs.ac.za
Phone:	051 401 2863 / 3960

PREVIOUS EMPLOYMENT:

04/1999 – 11/2000	Assistant – Environmental Consultant: <i>CEBO Environmental Consultants Inc.</i> , Bloemfontein
01/2001 – 03/2001	Substitute Biology Teacher: Grades 8 – 12, C&N Sekondêre Meisieskool Oranje, Bloemfontein
09/2001 – 07/2002	Environmental Consultant: <i>Mphatlalatsane Geographical Solutions Inc.</i> , Bloemfontein
05/2003 – 12/2004	Served on the board of directors of the <i>Oconee River Land Trust</i> , Athens, Georgia, USA
09/2003 – 01/2005	Pastry chef: <i>Big City Bread</i> , Athens, Georgia, USA
02/2005 – 12/2005	Administrative Assistant: Department of Plant Sciences, University of the Free State, Bloemfontein
03/2005 – 12/2008	Lecturer: Plant Biology (Advanced Certificate in Education), University of the Free State, Bloemfontein
02/2006 – 4/2012	Professional Officer: Centre for Environmental Management, UFS
4/2012 – Present	Senior Professional Officer: Centre for Environmental Management, UFS

TERTIARY EDUCATION, SPECIALIST COURSES AND WORKSHOPS:

1995 – 1997	B.Sc. (Botany & Entomology) University of the Free State, Bloemfontein <i>Merck prize and medal for Best progress in Botany</i>
1998	B.Sc. Honours (Terrestrial Ecology) <u>Research project</u> : <i>A plant classification of the riparian vegetation of the Soetdoring Nature Reserve</i> University of the Free State, Bloemfontein
1998	Resource identification and management course Presented by: Agriculture Centre, Potchefstroom
1999 - 2002	M.Sc. (Terrestrial Ecology) <i>Cum Laude</i> <u>Dissertation Title</u> : <i>The phytosociology of the Central Free State</i> University of the Free State, Bloemfontein
2006	VEGRAI : Riparian Vegetation Response Assessment Index for River Ecoclassification Roodeplaat Training Centre, Pretoria <u>Presented by</u> : Department of Water Affairs and Forestry Assessment: Attendance only
2007	HOS718: Postgraduate module in “ Postgraduate supervision ”, <u>Presented by</u> : University of the Free State, Bloemfontein Assessment: 70%
2008	Analysis and Classification of Ecological Data Using JUICE Software Course (1 Day) <u>Presented by</u> : Stellenbosch, South Africa Assessment: Attendance only

2009	Short Course: Introduction to qualitative research, (SPQUAL) <u>Presented by:</u> Prof Annette Wilkonson, University of the Free State, Bloemfontein Final Assessment: Pass
5, 12, 19, 26 Augustus 2010	Short Course: Qualitative research in practice (Advanced) <u>Presented by:</u> Prof Francois Strydom, University of the Free State, Bloemfontein Assessment: Pass
25 – 29 October 2010	Short Course: Integrated Land Management toward sustainable land use: Rehabilitation and Monitoring <u>Presented by:</u> University of North West, Potchefstroom Campus, Potchefstroom Assessment: 75%
18 April 2011	<u>Halfday Workshops:</u> New supervisors – making sense of new responsibilities Presented by: Prof Lynn McAlpine (University of Oxford) Compassionate rigour: Effective supervision Presented by: Dr Catherine Manathunga (University of Queensland)
3 – 6 May 2011	Short Course: Determination of the present ecological state within the Eco-classification process <u>Presented by:</u> University of the Free State in conjunction with Department of Water Affairs and various consultants Assessment: Attendance only
24 – 25 October 2011	Workshop: How to write the first draft on an article Presented by: Dr Christel Troskie de Bruyn (Higher and Adult Education, Faculty of Education, Stellenbosch University) Hosted by: University of the Free State, Bloemfontein
8 – 10 November 2011	Workshop: Assessing and evaluating theses and dissertations Presented by: Prof Chris Kapp, Higher and Adult Education, Faculty of Education, Stellenbosch University, Stellenbosch
15 – 17 February 2012	Workshop: 2nd Shale Gas Workshop/Think Tank and Field Trip <i>Nelson Mandela Metropolitan University, Port Elizabeth</i>
3 – 4 June 2013	Workshop: Qualitative Research: Requirements for post-graduate study projects Presented by: Dr Christel Troskie-de Bruin, Higher and Adult Education, Faculty of Education, Stellenbosch University, Stellenbosch Hosted by The Postgraduate School, University of the Free State, Bloemfontein
5 – 6 September 2013	Workshop: Research Supervision Presented by: Prof Gina Wisker, Brighton University Hosted by The Postgraduate School, University of the Free State, Bloemfontein
24 – 25 October 2013	Workshop: Questionnaire Design Presented by: Prof Rene Pellisier, UNISA Hosted by The Postgraduate School, University of the Free State, Bloemfontein
24 –27 February 2014	SPSS Hosted by The Postgraduate School, University of the Free State, Bloemfontein
Nov 2014 – March 2015	NUFFIC Strengthening Doctoral Supervision short course NQF 8, Internationally accredited Assessment: Passed. Highly competent
16 May 2016 – 3 June 2016	Dendroecology short course Presented by: Various lecturers and researchers from the Laboratory

	of Tree Ring Research, University of Arizona, Tucson, Arizona, U.S.A.
15 – 16 Nov 2016	Research integrity and ethics governance Presented by: Prof WA Hoffman and Dr R Visagie Hosted by: The Postgraduate School, University of the Free State, Bloemfontein
12 – 13 June 2017	Research methodology: introduction to experimental design and explorative data analysis Presented by: Marie Smith, Stats4Science Hosted by: The Postgraduate School, University of the Free State, Bloemfontein
7 June 2019	Ethics reviewers training Presented by: Dr Henriette van den Berg University of the Free State, Bloemfontein
1-8 September 2019	EURODENDRO Fieldweek: Dendroecology Organised and presented by: Dr Kerstin Treydte, Dr Jan Altman, Dr Vaclac Tremel and others Pec pod Snezkou, Czech Republic
17 January 2020	Article writing workshop for novice writers Presented by: Dr Alet Olivier Hosted by: The Postgraduate School, University of the Free State, Bloemfontein
22 April 2020	Formative Assessment Webinar Presented by: Teach On
7-9 April 2021	Grant proposal writing Presented by: Dr Charmaine Williamson Hosted by: The Postgraduate School, University of the Free State, Bloemfontein
21 May 2021	ConnectYard Webinar Hosted by: Centre for Teaching and Learning, University of the Free State, Bloemfontein
24 October – 7 November 2021	The 2021 training in Tree-ring science and its applications, Kitwe, Zambia
May 2022	Stable isotope course, UCT
2022 -	PhD (Environmental Sciences) Preliminary title: <i>A Late Holocene climate reconstruction for southern Africa utilizing dendroclimatology</i> North West University, Potchefstroom

PUBLICATIONS (LISTED ALPHABETICALLY):

Buschke, F.T., Avenant, M.F., Esterhuysen, S., **Kemp, M.**, Kruger, F.J., Ololade, O.O., Seaman, M.T., Vos, A.T. & Watson, M. **2016**. Producing the next generation of water resource experts in South Africa. *South African Journal of Science*. 112(3/4): 4 pages

Buschke, F.T., Esterhuysen, S., **Kemp, M.E.**, Seaman, M.T., Brendonck, L. & Vanschoenwinkel, B. **2013**. The dynamics of mountain rock pools- Are aquatic and terrestrial habitats alternative stable states? *Acta Oecologica* 47: 24-29

Buschke, FT, **Kemp, ME**, Seaman, MT & Louw, S.vdM. **2011**. Intra-annual variation of arthropod/plant interactions and arthropod trophic structure in an endangered grassland in the Free State Province, South Africa. *African Journal of Range and Forage Science* 28(2): 57–63

Esterhuysen, S., Avenant, M., Redelinghuys, N., Kijko, A., Glazewski, J., Plit, L.A., **Kemp, M.**, Smit,

A., Vos, A.T., & Williamson, R. **2016**. A review of biophysical and socio-economic effects of unconventional oil and gas extraction – Implications for South Africa. *Journal of Environmental Management* 184: 419 – 430

Esterhuysen, S., Avenant, M., Redelinghuys, N., Kijko, A., Glazewski, J., Plit, L., **Kemp, M.**, Smit, A., & Vos, A.T. **2018**. Monitoring of unconventional oil and gas extraction and its policy implications: A case study from South Africa. *Energy policy* 118: 109 – 120

Esterhuysen, S., Avenant, F., Watson, M., Redelinghuys, N., Kijko, A., Glazewski, J., Plit, L.A., **Kemp, M.**, Smit, A., Sokolic, F., Vos, A.T., Reynolds, D., Von Maltitz, M., Van Tol, J., Bragg, C., Van Soelen, B. & Ouzman, S. **2014**. Development of an Interactive Vulnerability Map and Monitoring Framework to Assess the Potential Environmental Impact of Unconventional Oil and Gas Extraction by Means of Hydraulic Fracturing. WRC Project No 2149/1/14. Water Research Commission, Pretoria.

Esterhuysen, S., **Kemp, M.** & Redelinghuys, N. **2013**. Assessing the existing knowledge base and opinions of decision makers on the regulation and monitoring of unconventional gas mining in South Africa. *Water International* 38(6): 687 – 700

Esterhuysen, S., Redelinghuys, N. & **Kemp, M.** **2016**. Unconventional oil and gas extraction in South Africa: water linkages within the population–environment–development nexus and its policy implications. *Water International*, 1941 – 1707

Esterhuysen, S., Sokolic, F., Redelinghuys, N., Avenant, M., Kijko, A., Glazewski, J., Plit, L., **Kemp, M.**, Smit, A., Vos, A.T., & Von Maltitz, M. J. **2017**. Vulnerability mapping as a tool to manage the environmental impacts of oil and gas extraction. *Royal Society Open Science*, 4(11), 171044.

Hobbs, P., Day, E., Rosewarne, P., Esterhuysen, S., Schulze, R., Day, J., Ewart-Smith, J., **Kemp, M.**, Rivers-Moore, N., Coetzee, H., Hohne, D., Maherry, A. AND Mosetsho, M. **2016**. Water Resources. In Scholes, R., Lochner, P., Schreiner, G., Snyman-Van der Walt, L. & De Jager, M. (eds.). 2016. Water Resources (Chapter 5) *In: Shale Gas Development in the Central Karoo: A Scientific Assessment of the Opportunities and Risks*. CSIR/IU/021MH/EXP/2016/003/A, ISBN 978-0-7988-5631-7, Pretoria: CSIR.

Ndzimbomvu, N.T., Rampedi, I.T. and **Kemp, M.E.**, 2021. Learning Environmental Issues from a Secondary School Curriculum: The Case of Learners in Mamelodi Township, South Africa. *Sustainability*, 13(16), p.9149.

Prucha, B., Graham, D., Watson, M., Avenant, M., Esterhuysen, S., Joubert, A., **Kemp, M.**, King, J., Le Roux, P., Redelinghuys, N., Rossouw, L., Rowntree, K., Seaman, M., Sokolic, F., Van Rensburg, L., Van Der Waal, B., Van Tol, J. & Vos, T. **2016**. MIKE-SHE integrated groundwater and surface water model used to simulate scenario hydrology for input to DRIFT-ARID: The Mokolo River case study. *Water SA*, 42(3): 384-398

Seaman, M.T., Watson, M., Avenant, M.F., Joubert, A.R., King, J.M., Barker, C.H., Esterhuysen, S., Graham, D., **Kemp, M.E.**, Le Roux, P.A., Prucha, B., Redelinghuys, N., Rossouw, L., Rowntree, K., Sokolic, F., Van Rensburg, L., Van Der Waal, B., Van Tol, J. & Vos, A.T. **2013**. Testing a methodology for Environmental Water Requirements in non-perennial rivers. The Mokolo River Case Study. WRC Project (TT579/13). Water Research Commission, Pretoria.

Seaman, M., Watson, M., Avenant, M., Joubert, A., King, J., Barker, C., Esterhuysen, S., Graham, D., **Kemp, M.**, Le Roux, P., Prucha, B., Redelinghuys, N., Rossouw, L., Rowntree, K., Sokolic, F., Van Rensburg, L., Van Der Waal, B., Van Tol, J. & Vos, T. **2016**. DRIFT-ARID: Application of a method for environmental water requirements (EWRs) in a non-perennial river (Mokolo River) in South Africa. *Water SA*, 42(3): 368-383

Seaman, M., Watson, M., Avenant, M., Joubert, A., King, J., Barker, C., Esterhuysen, S., Graham, D., **Kemp, M.**, Le Roux, P., Prucha, B., Redelinghuys, N., Rossouw, L., Rowntree, K., Sokolic, F., Van Rensburg, L., Van Der Waal, B., Van Tol, J. & Vos, T. **2016**. DRIFT-ARID: A method for assessing environmental water requirements (EWRs) for non-perennial rivers. *Water SA*, 42(3): 356-367

POSTER PRESENTATIONS:

Buschke, F.T. & **Kemp, M.E.** 2009. The merits of using insect communities in the bioassessment of grassland ecological integrity. *Grassland Society of South Africa, Grasslands, Timber and Fire. A Symposium, 14-15 October, Pietermaritzburg*

Buschke, F.T. & **Kemp, M.E.** 2010. What drives the intra-annual variation of an invertebrate assemblage in a grassland habitat? *Arid Zone Ecology Forum; Change and stasis in the arid zone, 4-7 October, Gariep Dam*

Buschke, F.T., Esterhuysen, S., **Kemp, M.E.** & Vanschoenwinkel, B. 2011. Are rock pools always rock pools? *3rd Orange River Basin Symposium, 8-9 June, Bloemfontein, South Africa*

Buschke, F.T., **Kemp, M.E.**, Louw, S.vdM & Seaman, M.T. **2011**. The South African Grassland Scoring System (SAGraSS), and arthropod-based habitat integrity index for grasslands. *ESSA XVII: Entomological Society of South Africa Congress, 3-6 July, Bloemfontein, South Africa*

Esterhuysen, E., **Kemp, M.E.**, Redelinghuys, N. **2012**. Assessing the opinions and perceptions of regulating authorities on Hydraulic Fracturing and the regulation thereof. *International Conference on Fresh Water Governance for Sustainable Development, 5 - 7 December, Champagne Sports Resort, Central Drakensberg, South Africa*

PLATFORM PRESENTATIONS:

KEMP, M.E., Van Rensburg, L.D., & Sokolic, F. **2010**. New insights into the components of the water balance in riparian zones. *45th Annual GSSA Congress: Sustainable and Adaptive Practices in Range and Pasture Systems, with an Emphasis on Arid Regions. 19 - 23 July. Kimberley, Northern Cape, South Africa*

Kemp, M.E., Van Rensburg, L.D. Le Roux, P.A.L. & Dennis, I. **2010**. A methodology to estimate the minimum water requirements for shallow rooted plants in the riparian zone: A case study of the Mokolo River. *Arid Zone Ecology Forum: Change and stasis in the arid zone, 4 - 7 October. Gariep Dam, South Africa*

Kemp, M.E. **2013**. The possible impact of unconventional gas mining on the vegetation of the arid zone: issues of scale. *Arid Zone Ecology Forum. 2 - 4 September. Mc Gregor Museum, Kimberley, South Africa.*

KEMP, M.E. **2014**. Mapping for Fracking: Developing an interactive vulnerability map for South Africa with a special focus on vegetation. *Kimberley Biodiversity Research Symposium. 22 September. McGregor Museum, Kimberley, South Africa.*

KEMP, M.E. **2018**. Reconstructing the past: a first attempt at using dendrochronology and alien invasive trees. *Arid Zone Ecology Forum, 16 - 18 October. Robertson, South Africa.*

KEMP, M.E. **2019**. Exploring the dendroecological potential of riparian Poplar trees, Caledon river, South Africa. *Eurodendro, 9 - 12 September. Brno, Czech Republic.*

PROFESSIONAL MEMBERSHIP:

2008 - Present	SACNASP (Pr. Sci. Nat) – Registration no: 400221/08 Field of specialization: Vegetation ecology
2015 - Present	Tree Ring Society (USA)

ADDITIONAL RESEARCH PROJECTS:

10/2000	Member of a national research team, investigating the status of “ <i>Aloe</i> ”
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	<i>pillansii</i> " in the Richtersveld
04/2009 – 03/2010	Monitoring of vegetation changes in a grassland, Free State National Botanical Gardens, Bloemfontein (Part of a mini-dissertation)
11/2010	Watson, M., Avenant, M.F. and Kemp, M.E. (2010) Specialist reports for the Lower Orange River. Joint Basin Survey – 1: 2010. Unpublished report

SUPERVISION OF MINI-DISSERTATIONS:

Acted as Supervisor:

OLIVIER, H 2008. A floristic comparison of natural and disturbed grasslands after the removal of commercial pine plantations in Mpumalanga, South Africa Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
EISELEN, W 2009. Succession on rehabilitating open-cast sand mines, North-Eastern Gauteng Province, South Africa Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
LE ROUX, CM 2009. The effects of tailings dam slope reclamation methods on vegetation growth Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
Milne, E 2009. Reseeding topsoil-deprived alluvial diamond mines in the Nama Karoo Biome of South Africa: A short-term study to investigate rehabilitation practices Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
GOPAUL, S 2012. Phyto-remediation applied at Ballengeich mine: A critical assessment Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
DREYER, LA 2013. The role of urban and environmental parameters in sustainable development and future growth of small towns: Parys – a case study Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
HANANA, A 2013. <i>Seriphium plumosum</i>: Assessing the knowledge of land reform farmers in the Eastern Free State Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
MBANANGA, N 2014. Has the expanded public works programme fulfilled its livelihood and environment goals in the Sakhisizwe Landcare management programme in South Africa? Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
DLAMINI, G 2014. Evaluating the impacts of an Environmental Expanded Public Works Project on Beneficiaries: A case study in Randfontein, South Africa Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
MATLOKO, N 2015. Fifteen years of clearing invasive alien plants in the Groenkloof Nature Reserve: Challenges and consequences for management Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
MUSHAPI, A 2015. Assessing attitudes and perceptions of farmers towards clearing invasive alien species: A case study of the Vhembe District Municipality, Limpopo Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
ACKERMAN, A 2016. Alien and invasive species regulations (2014): Implications of managing alien invasive plants in Bloemfontein Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
NIIPALE, J 2018. Investigating the effectiveness of forest management: Ncumcara

Community Forest 2005 – 2015 Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
HAUSIKO, L 2019: How effective are long-term monitoring programmes? A case study of the Khan River Riparian Vegetation Monitoring Programme Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
LEKWA, B 2019: The opportunities and risks of implementing an ISO 14001:2015 Environmental Management System: Perspectives from a South African manganese mine Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
GWEDDE, D 2020: Investigating illegal dumping in the Alfred Duma Local Municipality Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
RIBA, O 2020: The quality of agricultural environmental impact assessment reports in the Northern Cape Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
IKKING, S 2020: The Operational Value of Environmental Considerations in Military Operations in South Africa Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
BAKER, E 2020: The Role of Managerial and Environmental Factors in Sustainable Stream Crossing Development in Plantation Forestry – Mpumalanga Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
MPOFU-NTAOTE, N 2021: The management of electronic waste generated from solar photovoltaic systems in Lesotho: Challenges and opportunities Mini-dissertation (Master of Environmental Management), University of the Free State, Bloemfontein, South Africa
ROFIWE, M 2021: In progress
BARNES, S 2022: In progress
LETHEKO, B 2023: In progress

EXTERNAL EXAMINER: MINI-DISSERTATIONS FROM UFS

MUGWABANA, F 2006. Implementing veld condition assessment for Marakele National Park: Preliminary herbaceous component survey Mini-dissertation (Masters in Environmental Management), University of the Free State, Bloemfontein, South Africa
PIDA, T 2008. Investigation into factors that limit vegetation establishment on Mine Waste Rock Dumps Mini-dissertation (Masters in Environmental Management), University of the Free State, Bloemfontein, South Africa
HAINDONGO, LL 2010. Investigation of factors contributing to the poor water quality of an urban impoundment: Goreangab Dam case study Mini-dissertation (Masters in Environmental Management), University of the Free State, Bloemfontein, South Africa
BURGER, J 2011. The impact of bush clearing activities in Eskom servitudes on plant species composition and structure Mini-dissertation (Masters in Environmental Management), University of the Free State, Bloemfontein, South Africa
BABITSENG, TM 2012. The impact of wine tapping on the population structure and regeneration of <i>Hyphane petersiana</i> Klotzsch ex Mart. in Ngamilan district, Botswana Mini-dissertation (Masters in Environmental Management), University of the Free State, Bloemfontein, South Africa
VOS, M 2012. An assessment to quantify the impacts of <i>Acacia mellifera</i> subsp <i>detinens</i> on the natural habitat of Rolfontein Nature Reserve, Northern Cape, South Africa Mini-dissertation (Masters in Environmental Management), University of the Free State, Bloemfontein, South Africa
MOJAKHOMO, M 2013. Assessment of uncontrolled exploitation of medicinal plants (MPs) for the Muti Market in Maseru, Lesotho Mini-dissertation (Masters in Environmental Management), University of the Free State, Bloemfontein, South Africa
MÖLLER, MJ 2013. Evaluation of the effectiveness of the national policy on the utilization

of Devil's Claw (*Harpagophytum*) products – Ministry of Environment and Tourism, Namibia Mini-dissertation (Masters in Environmental Management), University of the Free State, Bloemfontein, South Africa

NDUNGU, AN 2013. **An investigation into the management of sanitation facilities at selected primary schools in the Leribe and Bothe Bothe districts of Lesotho** Mini-dissertation (Masters in Environmental Management), University of the Free State, Bloemfontein, South Africa

SHILONGO, K 2014. **Impacts of exotic invasive plants on the composition and structure of riparian woody vegetation in the Lower Orange River- Tsau//Khaeb (Sperrgebiet) National Park, Namibia** Mini-dissertation (Masters in Environmental Management), University of the Free State, Bloemfontein, South Africa

LESENJANE, NM 2017. **Application of the waste management hierarchy in Moses Kotane Local Municipality** Mini-dissertation (Masters in Environmental Management), University of the Free State, Bloemfontein, South Africa

MACHAKA, TL 2017. **The effects of Eucalyptus harvest residue management on selected soil properties and subsequent initial tree growth in the KwaMbonambi forest area of KwaZulu-Natal, South Africa** Mini-dissertation (Masters in Environmental Management), University of the Free State, Bloemfontein, South Africa

EXTERNAL EXAMINER: DISSERTATIONS FROM OTHER INSTITUTIONS

MATERECHERA, F.M. (2012) **Towards integrated catchment Management: Challenges surrounding implementation in the Gamtoos River Catchment.** MSc (Environmental Geography), Nelson Mandela Metropolitan University, Port Elizabeth, South Africa

MTHOKOZISI M. (2018) **The phenology of the Enkankala Grasslands.** MSc University of the Witwatersrand, Johannesburg, South Africa

TEACHING AND LEARNING

Module	Role and Responsibilities
IWRM5820 Integrated water resources science (PG Dip in Integrated Water Management)	Lecture title: The role and function of riparian vegetation in Integrated Water Management; Assessing either an assignment or examination question
Module	Role and Responsibilities
ENMT7905 / IWRM7905 / CLIM7905 (Research module)	Coordinate and facilitate a one week workshop for our MSc students; Present a number of lectures during this workshop and assess a number of assignments.

COURSE DESCRIPTION
This module introduces students from three different MSc programs to the process of scientific research. During this module, the research process will be broken down into various sub-steps:

1. Identifying a tractable research problem relevant to environmental management
2. Interrogating this problem in the context of existing academic literature
3. Developing robust and appropriate methods to address the problem
4. Integrating this information into a coherent research proposal; and
5. Understanding and considering the highest ethical standards during the whole research process.

PURPOSE OF THIS MODULE
The purpose of this module is to prepare the students for the research component of this MSc degree.

LEARNING OUTCOMES

At the end of the semester, the student should be able to:

- Identify and conceptualise a research problem
- Synthesise, integrate and critique appropriate academic literature
- Identify appropriate methods to solving a clearly-defined problem
- Articulate a research strategy in a formal written proposal, which can be defended verbally
- Prepare and submit an application for ethical clearance.

EXTERNAL MODERATOR

MODULE NAME: Environmental Research Project MODULE CODE: HRENV80 ASSESSMENT TYPE: Portfolios	EXAMINATION PERIOD: Jan/Feb2023	UNISA
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I hereby confirm that all the information on this CV is correct.

Date: 2023-02-19

