

Curriculum Vitae: Dr. Paul Lourens

Lecturer: Institute for Groundwater Studies

University of the Free State

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Education

PhD in Geohydrology
2023

University of the Free State, Bloemfontein, South Africa

Thesis: *Development of a Monitoring Programme for the Coal-Based Synthetic Fuel Industry in South Africa*

MSc in Geohydrology, cum laude
2013

University of the Free State Bloemfontein, South Africa

Dissertation: *The Relationship between South African Geology and Geohydrology*

BSc Hons. in Geohydrology
2010

University of the Free State Bloemfontein, South Africa

BSc Hons. in Geology
2010

University of the Free State Bloemfontein, South Africa

BSc in Geology
2009

University of the Free State Bloemfontein, South Africa

Employment History

Lecturer
Jan 2016 - Present

University of the Free State, Institute for Groundwater Studies

Research Assistant
Jan 2010 – Dec 2015

University of the Free State, Institute for Groundwater Studies

Teaching Experience

Postgraduate modules

GEOH6845 – Mining Geohydrology and Hydrology (2016 – present)
GEOH6805 – Groundwater Hydraulics (Geology and Groundwater 2022 – present)
GEOH6835 – Hydrochemistry and Pollution (Groundwater sampling practical 2016-present)
IGS Winter Field School – (2016 – present)

Postgraduate Research Supervision

Honours
Completed

1. Munyai M. BSc Hons, UFS (2018)
2. Ndivho S. BSc Hons, UFS (2018)
3. Phindile M. BSc Hons, UFS (2018)
4. Phirime K. BSc Hons, UFS (2018)
5. Thwala L. BSc Hons, UFS (2018)
6. Holloway MT. BSc Hons, UFS (2019)
7. Greyling R. BSc Hons, UFS (2019)
8. Manamela PA. BSc Hons, UFS (2019)
9. Mehlomakhulu M. BSc Hons, UFS (2019)
10. Mokoma E. BSc Hons, UFS (2019)
11. Nhlebeya K. BSc Hons, UFS (2019)
12. Ngaka TRK. BSc Hons, UFS (2019)
13. Chopela M. BSc Hons, UFS (2020)
14. Mostert RSC. BSc Hons, UFS (2020)
15. Nkadimeng MS. BSc Hons, UFS (2020)
16. Tinzi NP. BSc Hons, UFS (2020)
17. Viljoen T. BSc Hons, UFS (2020)
18. Bengu C. BSc Hons, UFS (2021)
19. Claassen A. BSc Hons, UFS (2021)
20. Mlengana QY. BSc Hons, UFS (2021)
21. Morodi MKA. BSc Hons, UFS (2021)

Honours

Current

1. Bester L, BSc Hons, UFS (2023)
2. Hloya L, BSc Hons, UFS (2023)
3. Stuurman F, BSc Hons, UFS (2023)

Masters

Completed

1. Du Toit, M. MSc, UFS (2019; supervisor)
2. Pretorius A. MSc, UFS (2019; supervisor)
3. Holloway MT. MSc, with distinction, UFS (2022; supervisor)
4. Schreuder H. MSc, with distinction, UFS (2022; supervisor)
5. Engelbrecht C. MSc, with distinction, UFS (2023; supervisor)

Masters

Current

1. Deetliffs M. MSc, UFS (2020 - ; supervisor)
2. Mposhomali T. MSc, UFS (2016 - ; supervisor)
3. Swanepoel J. MSc, UFS (2021 - ; co-supervisor)
4. Mashimbye C. MSc, UFS (2023 – (supervisor)

Doctoral

Current

1. Kudakwashe M. PhD, UFS (2023 - ; co-supervisor)

Postgraduate Thesis and Dissertation Examination

Internal

1. Paxton N. MSc (Geohydrology; 2018)
2. Steyn AJ. MSc (Geohydrology; 2019)
3. Govender N. MSc (Geohydrology; 2019)
4. Fourie SA. MSc (Geohydrology; 2020)
5. Gerber AF. MSc (Geohydrology; 2020)
6. Lubbe R. MSc (Geohydrology; 2020)
7. Thwala K. MSc (Geohydrology; 2021)
8. Stander F. MSc (Geohydrology; 2022)
9. Ngaka TRK. MSc (Geohydrology; 2022)
10. Phelelani NT. MSc (Geohydrology; 2022)

Committees

Review Committees

1. International Scientific Committee (ISC) for the International Mine Water Association Conference for the years 2018, 2019, 2020, 2021, and 2023.

Professional Development

Teaching and Learning

1. Thesis Examination Workshop, UFS (2023)
2. Teaching Portfolio Workshop, UFS (2023)
3. NAS Curriculum Mapping Workshop, UFS (2021)

Research

1. Qualitative Research Methodology Webinar, UFS (2021)

Geohydrology

1. Geohydrology: Practical Skills Course, Groundwater Division of the SSGS (2023)
2. What hydrogeologists need to know about borehole construction, pumps VSDs and borehole Operation, Groundwater Division of the SSGS, Webinar (2022)
3. Groundwater: Setting the standards – Borehole Drilling; Pumping Tests and Monitoring, IAH-SA Workshop (2020)

Publications

Peer-Reviewed Journals:

1. **Gomo M, Vermeulen D and Lourens P (2017).** *Groundwater Sampling: Flow-Through Bailer Passive Method versus Conventional Purge Method.* Nat Resources Res. DOI: 10.1007/s11053-017-9332-9

Peer-Reviewed National and International Conference Proceedings:

1. **Lourens P.J.H.,** Pretorius A., Vermeulen P.D. (2021) *Groundwater Source Determination of an Underground Diamond Mine Utilizing Water Chemistry and Stable Isotopes Analysis.* IMWA 2021, 12-15 July, Cymru, Wales.
2. **Lourens P.J.H.,** Erasmus M., Hansen R., Allwright A. (2020) *Groundwater Nitrate Bioremediation of a Fractured Rock Aquifer System in South Africa.* IMWA 2020, New Zealand.

3. **Lourens P.J.H.**, Vermeulen P.D., Fourie F. and Haumann J. (2016) *Impact of Fertilizer Effluent Disposed in Dolerite Quarries on the Groundwater Quality*. IMWA 2016, 11-15 July 2016, Leipzig, Germany.
4. **Lourens P.J.H.**, Vermeulen P.D., Allwright A. (2019) *Aquifer Rebound Investigation at a Defunct Coal Colliery in South Africa*. IMWA 2019, 15-19 July, Perm, Russia.
5. Fourie, F., Vermeulen, D., Vermaak, N. and **Lourens, P.** (2019) *A practical guide to conserving groundwater underground*. Proceedings of IAHD2019, the 46th Annual Congress of the International Association of Hydrogeologists, Malaga (Spain) – Groundwater Management and Governance, Coping with Uncertainty, 22-27 September 2019, p 211. ISBN: 978-84-938046-3-3
6. **Lourens, P** and Vermeulen PD (2017) *Dewatering Impacts of a South African Underground Coal Mine*. IMWA 2017 – Mine Water and Circular Economy, pp. 420 - 429, 13th Congress of International Mine Water Association, Lappeenranta, Finland, June 25-30, 2017. ISBN number, printed publication: 978-952-335-065-6, ISBN number, electronic publication: 978-952-335-066.

Non Peer-Reviewed National and International Conference Proceedings:

1. Engelbrecht C. and **Lourens P.J.H.** (2022) *Well Efficiency and Performance: Influencing Factors and Management Guidelines*. ISMAR 2022, 11-15 April, Long Beach, CA, USA.
2. Holloway M. and **Lourens P.J.** (2021) *Prefeasibility Study for Managed Aquifer Recharge within the Greater Kruger National Park, Limpopo Province, South Africa*, 17th Groundwater Division Groundwater Conference and Exhibition, 17-20 October 2021, Pretoria, South Africa.
3. **Lourens, P.J.H.** and Vermeulen, P.D. (2017) *Dewatering impacts of a South African underground coal mine*, 15th Biennial Groundwater Division Conference and Exhibition, 16-18 October 2017, Spier Wine Estate, Stellenbosch, South Africa.
4. **Lourens P.J.H.** (2014) *Monitoring of the Coal Related Synthetic Fuel Industry in South Africa*. International Field Workshop for Young Hydrogeologists. IAHD Events 25-27 June 2014, Sosnowiec-Belchatow, Poland.
5. **Lourens P.** and Vermeulen P.D. (2013) *The Relationship between South African Geology and Geohydrology*. 13th Biennial Groundwater Division Conference & Exhibition, 17-19 September 2013, Durban, South Africa.

Professional Membership

1. South African Council for Natural Scientific Professions (SACNASP) No.: 117556
2. International Mine Water Association (IMWA) No.:1336
3. International Association of Hydrogeologist (IAH) No.: 139762
4. Water Institute of South Africa (WISA) No.:29438
5. Groundwater Division of the Geological Society of South Africa (GWD) No.: 10044

Key Expertise in Geohydrology

1. Groundwater technical report compilation
2. Design and development groundwater monitoring programmes
3. Groundwater investigations related to mining, industrial and agricultural activities
4. Geochemical-related fieldwork and interpretation
5. Aquifer Hydraulics – Aquifer testing to determine hydraulic properties and sustainable/safe abstraction rates
6. Geophysical Investigations (magnetic; electromagnetic; resistivity)
7. Groundwater exploration
8. Drilling supervision

Geohydrological Projects

1. Development of monitoring programmes for the petro-chemical industries (2011 – 2023)
2. Groundwater investigations and monitoring for petro-chemical industries (2011 – 2016)
3. Groundwater monitoring at a defunct coal mine within the Free State Coal Fields, Free State Province, South Africa (2015-2020)
4. Nitrogen effluent groundwater contamination monitoring and development of remediation solutions (2014-2020)
5. Groundwater monitoring at a Diamond Mine, Northern Cape, South Africa (2010-2018)
6. Impacts of fertilizer effluent storage facilities on the underlying aquifer (2014 – 2016)
7. Dewatering impacts of an underground coal mine in the Free State Province, South Africa (2015-2016)
8. ABA studies of the Mpumalanga Coal Fields, South Africa (2015-2017)
9. The effect of a graben structure on groundwater pollution movement at a petro-chemical site (2016 – 2019)
10. Groundwater inflow investigation at an underground diamond mine utilizing water chemistry and isotope analysis in the Northern Cape Province, South Africa (2018-2019)

References

Prof. Danie Vermeulen

Dean, Faculty of Natural and Agricultural Sciences
University of the Free State
PO Box 339
Bloemfontein, 9300

Dr. Eelco Lukas

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