

UNIVERSITY OF SOUTH AFRICA

UNISA is the only publicly funded Institution in South Africa dedicated to distance education. In keeping with its mandate as a comprehensive, open and distance learning tertiary institution offering a variety of academic and career-focused programmes, the University is inviting applications for positions in the **COLLEGE OF SCIENCE ENGINEERING AND TECHNOLOGY.**

To be considered for a position, applicants must meet all the generic requirements <u>plus</u> the specific requirements as stated per position. If found suitable for appointment, Unisa may offer an applicant a position at a level other than the level that was applied for. Furthermore, Unisa reserves the right to offer the applicant a contract appointment.



TEACHING STATEMENT:

All applicants to attach a teaching statement (max 2 000 words) to their application as specified in one of the following options:

Option A: External applicants and internal applicants (from non-academic positions) – Describe how you intend to approach teaching and learning by taking into account the information in the policies listed below:

- Unisa's Tuition Policy
- Unisa's Open Distance Learning Policy
- Unisa's Assessment Policy
- Curriculum Policy
- Open Distance Learning (ODL) Pedagogy

The above mentioned Policies of UNISA can be accessed on the web using a search engine. In the event that you cannot trace the ODL Pedagogy policy finalise your teaching statement without it.

Option B: Internal applicants (from academic positions) -

Explain your:

- Involvement in, or approach to, Open Distance Learning
- Approach to fostering a learner-centered approach
- Involvement in, or approach to, teaching at either undergraduate or postgraduate level
- Involvement in developing study material as an individual or in a team approach
- The extent to which you have, or would, use an electronic learning platform for teaching
- Your pass success rates in the courses you teach/taught and your plan to increase or maintain these rates
- A peer and student evaluation of your teaching
- Your involvement in and provision of learner support to students



The teaching statement must be supported by a portfolio of evidence which may be requested from short listed candidates at the interview.

Candidates are expected to submit a research reflection or portfolio



APPLICATION FORM FOR A PERMANENT ACADEMIC POST.docx



COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY SCHOOL OF ENGINEERING

DEPARTMENT OF CIVIL AND ENVIRONMENT ENGINEERING AND BUILDING SCIENCE SCIENCE CAMPUS (FLORIDA)

PROFESSOR X1

SENIOR LECTURER X1

(ACADEMICS) CANDIDATES WITH A RESEARCH OR ACADEMIC BACKGROUND (NON-ACADEMICS) CANDIDATES FROM INDUSTRY

<u>Professor (X1): Civil and Environment Engineering and Building Science</u> (*Ref.JM/Re-Ad7/P-CEEBS/01*) Post specific requirements for Professor:

- A Doctoral Degree in Civil Engineering or equivalent plus experience/track record as a researcher or a professional engineer that warrants the position of Professor, and
- A BSc or BEng in Civil Engineering, or a BTech in Civil Engineering or equivalent.
- A proven record of supervision of master's and Doctoral candidates to completion
- Eligibility to register with the Engineering Council of South Africa as a Professional Engineer or Professional Engineering Technologist within 2 years effective after the appointment date.
- 5 years teaching/work/relevant experience
- Proven research profile and consistent publication record in peer-reviewed conference proceedings or journals in line with the Unisa Research and Innovation Policy at this level.
- A proven record of supervision of postgraduate master's and Doctoral students to completion.

Field of Expertise:

 The candidate must have expertise in at least one of the following research areas:
 Transportation Engineering or Water Engineering or Geotechnical engineering or Construction materials or Structural engineering or Environmental engineering

Recommendations:

- Professional Registration with ECSA
- NRF rating
- · Evidence of research grants obtained or applied for
- Experience with reflexive/ODL research
- Participation in departmental, school, college and University committees including workplace committees or task teams and voluntary associations.
- Participation in community engagement projects

<u>Senior Lecturer (X1): Civil and Environment Engineering and Building Science</u> (*Ref.JM/Re-Ad3/SL-CEEBS/02*) Post specific requirements for <u>Senior Lecturer:</u>

- A Doctoral Degree in Civil Engineering or equivalent plus experience/track record as a researcher or a professional engineer that warrants the position of Senior lecturer, and
- A BSc or BEng in Civil Engineering, or a BTech in Civil Engineering or equivalent.
 A proven record of supervision of master's or Doctoral candidates to completion
- Eligibility to Register with the Engineering Council of South Africa within 2 years of appointment.
- 3 years teaching/work/relevant experience
- Proven research profile and consistent publication record in peer-reviewed conference proceedings or journals in line with the Unisa Research and Innovation Policy at this level.

A proven record of supervision of postgraduate masters students to completion.

Field of Expertise:

The candidate must have expertise in Structural Engineering.

Recommendations:

- Professional Registration with ECSA
- NRF rating
- Evidence of research grants obtained or applied for
- Experience with reflexive/ODL research
- Participation in departmental, school, college and University committees including workplace committees or task teams and voluntary associations.
- Participation in community engagement projects

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY
SCHOOL OF ENGINEERING
DEPARTMENT OF MINING MINERALS AND GEOMATICS ENGINEERING
FLORIDA-SCIENCE CAMPUS (FLORIDA)
ASSOCIATE PROFESSOR X1

(ACADEMICS) CANDIDATES WITH A RESEARCH OR ACADEMIC BACKGROUND (NON-ACADEMICS) CANDIDATES FROM INDUSTRY

<u>Associate Professor (X1): Mining Minerals and Geomatics Engineering (Ref.JM/Re-Ad7/AP-MMGE/03)</u> Post specific requirements <u>Associate Professor.</u>

- A Doctoral degree in Mining Engineering or equivalent plus experience/track record as a researcher for a
 position of Associate Professor
- A BSc or BEng in Mining Engineering, or a BTech in Mining Engineering
- A proven record of supervision of master's OR Doctoral candidates to completion
- Professional Registration with ECSA as Pr Eng or Pr Tech Eng or registration in progress.
- 4 years teaching/work/relevant experience
- Proven research profile and consistent publication record in peer-reviewed conference proceedings, journal articles, book chapters, or books in line with the Unisa Research and Innovation Policy at this level.

Field of Expertise for this position:

The candidate must have expertise in at least one of the following research areas:
 Rock Engineering, Mine Design and Planning, Mine Mechanisation, Mineral Economics, Geostatistics and Geometallurgy.

- A Bachelor's degree (NQF7/8) in a discipline closely related to Mining Engineering
- NRF rating or eligibility to apply for rating.
- Evidence of research grants obtained or applied for
- Experience with reflexive/ODL research
- Participation in departmental, school, college and University committees including workplace committees or task teams and voluntary associations.
- Participation in community engagement projects

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY

SCHOOL OF ENGINEERING

DEPARTMENT OF MECHANICAL, BIORESOURCES AND BIOMEDICAL ENGINEERING SCIENCE CAMPUS (FLORIDA)

PROFESSOR X1

SENIOR LECTURER X2

LECTURER X1

(ACADEMICS) CANDIDATES WITH A RESEARCH OR ACADEMIC BACKGROUND (NON-ACADEMICS) CANDIDATES FROM INDUSTRY

Preamble

The vision of Unisa, "The African University shaping futures in the service of humanity," is strongly upheld by the Department of Mechanical, Bioresources and Biomedical Engineering. The department contributes to this vision by nurturing world-class, innovative leaders equipped to address Africa's engineering challenges and advance global knowledge. Through a strong commitment to academic excellence, quality service, accountability, adaptability, equity, respect, and integrity, the department creates an inclusive and forward-looking academic environment. Our state-of-the-art facilities and extensive laboratory infrastructure enable pioneering research and practical innovation, empowering students and researchers to develop impactful solutions that serve humanity and shape a better future.

<u>Professor (X1): Mechanical, Bioresources and Biomedical Engineering</u> (Ref.JM/NEW/P-MBBE/04) Post specific requirements for <u>Professor:</u>

- A Doctoral Degree in Mechanical or Biomedical Engineering or equivalent plus experience/track record as a researcher or a professional engineer that warrants the position of Professor, and
- A BSc or BEng in Mechanical or Biomedical Engineering, or a BTech in Mechanical or Biomedical Engineering or equivalent.
- A proven record of supervision of master's and Doctoral candidates to completion
- Professional Registration with ECSA as Pr Eng or Pr Tech Eng or registration in progress.
- 5 years teaching/work/relevant experience
- Proven research profile and consistent publication record in peer-reviewed conference proceedings or journals in line with the Unisa Research and Innovation Policy at this level.

Field of Expertise:

The candidate must have expertise in at least one of the following research areas:
 Soft Tissue Mechanics and Computational Modelling, Tissue engineering, Trauma and Impact Biomechanics, Mechanical Engineering Design

- Professional Registration with ECSA
- NRF rating
- · Evidence of research grants obtained or applied for
- Experience with reflexive/ODL research
- Participation in departmental, school, college and University committees including workplace committees or task teams and voluntary associations.
- Participation in community engagement projects

Senior Lecturer (X2): Mechanical, Bioresources and Biomedical Engineering (Ref.JM/NEW/SL-MBBE/05)

Post specific requirements for Senior Lecturer:

- A Doctoral Degree in Mechanical or Biomedical Engineering or equivalent plus experience/track record as a researcher or a professional engineer that warrants the position of Senior lecturer, and
- A BSc or BEng in Mechanical or Biomedical Engineering, or a BTech in Mechanical or Biomedical Engineering or equivalent.
- A proven record of supervision of master's or Doctoral candidates to completion
- Professional Registration with ECSA as Pr Eng or Pr Tech Eng or registration in progress.
- 3 years teaching/work/relevant experience
- Proven research profile and consistent publication record in peer-reviewed conference proceedings or journals in line with the Unisa Research and Innovation Policy at this level.

Field of Expertise:

 The candidate must have expertise in Solid Mechanics, Mechanical Engineering Design, Manufacturing Technology, Fluids Mechanics, Mechanics of Machines, Engineer in society, Environmental Engineering and Automatic Control, Biomechanics, Computational Modelling of Biological Systems, Tissue Engineering and Biomaterials, Innovation in Health Technology for Low-Resource Settings

Recommendations:

- Professional Registration with ECSA
- NRF rating
- Evidence of research grants obtained or applied for
- Experience with reflexive/ODL research
- Participation in departmental, school, college and University committees including workplace committees or task teams and voluntary associations.
- Participation in community engagement projects

Lecturer (X1): Mechanical, Bioresources and Biomedical Engineering (Ref.JM/NEW/I-MBBE/06)

Post specific requirements for Lecturer:

- A master's degree in Mechanical or Biomedical engineering or equivalent in addition to a BSc or BEng in Mechanical or Biomedical Engineering, or a BTech in Mechanical or Biomedical Engineering or equivalent.
- Professional Registration with ECSA as Pr Eng or Pr Tech Eng or registration in progress.
- At least 3 years of teaching/work/relevant experience.
- Proof of advancement towards the PhD degree.

Field of Expertise:

 The candidate must have expertise in Solid Mechanics, Mechanical Engineering Design, Manufacturing Technology, Fluids Mechanics, Mechanics of Machines, Engineer in society, Environmental Engineering and Automatic Control, Biomechanics, Computational Modelling of Biological Systems, Tissue Engineering and Biomaterials, Innovation in Health Technology for Low-Resource Settings

- Experience with reflexive/ODL research
- Participation in departmental, school, college and University committees, workplace committees, task teams, and voluntary associations.
- Participation in community engagement projects

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY SCHOOL OF SCIENCE

DEPARTMENT OF MATHEMATICAL SCIENCES

FLORIDA-SCIENCE CAMPUS (FLORIDA)

ASSOCIATE PROFESSOR (P5) X1: PURE MATHEMATICS

(ACADEMIC CANDIDATES WITH A RESEARCH OR ACADEMIC (NON-ACADEMICS) CANDIDATES FROM

Associate Professor (X1): Pure Mathematics (Ref.JM/Re-Ad8/AP-Pure/07)

Post specific requirements for Associate Professor:

- A Doctorate degree or equivalent in Pure Mathematics or related field.
- Proven research profile and consistent publication record in accredited journals, peer-reviewed conference proceedings, books or book chapters in line with the Unisa Research and Innovation Policy at this level.
- A minimum of four years teaching experience in a Higher Education institution
- A proven record of supervision of research Masters or Doctoral students to completion.

Field of Expertise for this position:

• The candidate must have expertise in one or more of the following areas: Algebraic Logic, Category Theory, Commutative Algebra, Functional Analysis, Measure Theory, Nonstandard Analysis, Operator Theory, Universal Algebra, Algebraic Topology.

Recommendations:

- Experience with teaching in an online environment.
- An NRF rating or proof of application thereof would be an advantage.
- Participation in community engagement projects
- Active academic citizenship roles
- Proven record of national/international collaborations.

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY SCHOOL OF COMPUTING SCIENCE CAMPUS (FLORIDA)

SENIOR LECTURER (P6) X1: COMPUTER SCIENCE

(ACADEMICS) CANDIDATES WITH A RESEARCH OR ACADEMIC BACKGROUND (NON-ACADEMICS) CANDIDATES FROM INDUSTRY

Senior Lecturer (X1): Computer Science (Ref.JM/Re-Ad8/SL-CS/08)

Post specific requirements for **Senior Lecturer**:

- A Doctorate degree in Computer Science or related field
- A Research profile with publications in accredited journals, peer-reviewed conference proceedings, books, or book chapters in line with the Unisa Research and Innovation Policy or appropriate industry experience will be considered.

- Evidence of supervision of Honours and master's students or appropriate industry experience will be considered.
- Research in the field of Computer Science in one or more in these areas, Artificial Intelligence, Machine Learning, Data Science, Theoretical Computer Science, Image Processing, Software Engineering, Natural Language Processing, Security, Scientific Computing, Computer Architecture, Data Science, and Robotics
- Participating in Engaged Scholarship (Community Engagement)
- Experience in participating in different committees in department, school, or external bodies.

Recommendations:

- Experience and preparedness to advance Open Distance Learning pedagogy.
- Record of successful application for external funding
- Experience in Program Development, Program Review and Program Qualification Mix.
- Experience in leadership including heading different committees.
- Experience in attracting external funding.

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY SCHOOL OF COMPUTING SCIENCE CAMPUS (FLORIDA)

5 YEAR CONTRACT WITH BENEFITS

PROFESSOR/ ASSOCIATE PROFESSOR X4 (P4/P5) CENTRE FOR AUGMENTED INTELLIGENCE AND DATA SCIENCE (CAIDS)

Through research, CAIDS integrates Artificial Intelligence and Data Science into key areas, such as medicine, education, and renewable energy, to directly contribute to shaping a future where these technologies serve the communities across Africa and globally. CAIDS, therefore, values the potential for AI technologies to break down language and cultural barriers by providing accessible and personalised services that cater to diverse needs, thus aligning with Unisa's vision of transcending such barriers and serving every country on the African continent.

(ACADEMICS) CANDIDATES WITH A RESEARCH OR ACADEMIC BACKGROUND (NON-ACADEMICS) CANDIDATES FROM INDUSTRY

<u>Professor/Associate Professor P4 (X1): Natural Language Processing</u> (Ref.JM/Re-Ad/CAIDS/P.AP-NLP/09) Post specific requirements for Professor:

- A doctorate degree in computer science/information systems/information technology or related fields in science, engineering and technology.
- Candidate must have a proven track record in the field of Natural Language Processing, specifically applied to at least two of these areas: Speech and Voice Recognition Systems, Smart Assistants, Healthcare Systems, Language Translation, and Text Analytics.
- Candidate must have a proven research profile and consistent publication record in accredited journals, peer-reviewed conference proceedings, books or book chapters in line with the Unisa Research and Innovation Policy at this level.
- 5 years of teaching/work/relevant experience.
- A proven record of supervision of postgraduate Master's and Doctoral students to completion.
- Involvement in industry-based research, engaged scholarship and a proven record of attracting external funding.

Recommendations:

- NRF rating.
- A proven track record of successful mentoring of Postdoctoral Fellows.

Requirements for Associate Professor:

- Candidate must have a proven track record in the field of Natural Language Processing, specifically
 applied to at least two of these areas: Speech and Voice Recognition Systems, Smart Assistants,
 Healthcare Systems, Language Translation, and Text Analytics.
- Candidate must have a proven research profile and consistent publication record in accredited journals, peer-reviewed conference proceedings, books or book chapters in line with the Unisa Research and Innovation Policy at this level.
- 4 years of teaching/work/relevant experience.
- A proven record of supervising postgraduate master's students to completion.
- Involvement in industry-based research, engaged scholarship and the ability to attract external funding.

Recommendations:

- NRF rating.
- A proven track record of successful mentoring of Postdoctoral Fellows.

Professor/Associate Professor P5 (X1): Computer Vision (Ref.JM/Re-Ad/CAIDS/P.AP-CV/10)

Post specific requirements for Professor:

- A doctorate degree in computer science/information systems/information technology or related fields in science, engineering and technology.
- Candidate must have a proven track record in the field of Computer Vision, specifically applied to at least two of these areas: Surveillance Systems, Robotics, Autonomous Vehicles, Medical Imaging, Motion Capture, and Machine Inspection.
- Candidate must have a proven research profile and consistent publication record in accredited journals, peer-reviewed conference proceedings, books or book chapters in line with the Unisa Research and Innovation Policy at this level.
- 5 years of teaching/work/relevant experience.
- A proven record of supervision of postgraduate Master's and Doctoral students to completion.
- Involvement in industry-based research, engaged scholarship and a proven record of attracting external funding.

Recommendations:

- NRF rating.
- A proven track record of successful mentoring of Postdoctoral Fellows.

Requirements for Associate Professor:

- Candidate must have a proven track record in the field of Computer Vision, specifically applied to at least two of these areas, Surveillance Systems, Autonomous Vehicles, Medical Imaging, Motion Capture, Machine Inspection.
- Candidate must have a proven research profile and consistent publication record in accredited journals, peer-reviewed conference proceedings, books or book chapters in line with the Unisa Research and Innovation Policy at this level.
- 4 years of teaching/work/relevant experience.
- A proven record of supervision of postgraduate master's students to completion.
- Involvement in industry-based research, engaged scholarship and the ability to attract external funding.

- NRF rating.
- A proven track record of successful mentoring of Postdoctoral Fellows will be an added advantage.

Professor/Associate Professor P5 (X1): Data Science (Ref.JM/Re-Ad/CAIDS/P.AP-DS/11)

Post specific requirements for Professor:

- A doctorate degree in computer science/information systems/information technology or related fields in science, engineering and technology.
- Candidate must have a proven track record in the field of Data Science, specifically applied to at least two
 of these areas: Artificial Intelligence of Things (AloT), Artificial Intelligence Ethics, Education Technology
 (learner analytics), Healthcare Data Analytics, Data Science in Renewable Energy, and Sentiment Analysis
 in student support.
- Candidate must have a proven research profile and consistent publication record in accredited journals, peer-reviewed conference proceedings, books or book chapters in line with the Unisa Research and Innovation Policy at this level.
- 5 years of teaching/work/relevant experience.
- A proven record of supervision of postgraduate Master's and Doctoral students to completion.
- Involvement in industry-based research, engaged scholarship and a proven record of attracting external funding.

Recommendations:

- NRF rating.
- A proven track record of successful mentoring of Postdoctoral Fellows.

Requirements for Associate Professor:

- Candidate must have a proven track record in the field of Data Science, specifically applied to at least two
 of these areas, Artificial Intelligence of Things (AloT), Artificial Intelligence Ethics, Education Technology
 (learner analytics), Healthcare Data Analytics, Data Science in Renewable Energy, Sentiment Analysis in
 student support.
- Candidate must have a proven research profile and consistent publication record in accredited journals, peer-reviewed conference proceedings, books or book chapters in line with the Unisa Research and Innovation Policy at this level.
- 4 years of teaching/work/relevant experience.
- A proven record of supervision of postgraduate master's students to completion.
- Involvement in industry-based research, engaged scholarship and the ability to attract external funding.

Recommendations:

- NRF rating.
- A proven track record of successful mentoring of Postdoctoral Fellows will be an added advantage.

<u>Professor/Associate Professor P5 (X1): Augmented Intelligence</u> (Ref.JM/Re-Ad/CAIDS/P.AP-AI/12) Post specific requirements for Professor:

- A doctorate degree in computer science/information systems/information technology or related fields in science, engineering and technology.
- Candidate must have a proven track record in the field of Augmented Intelligence, specifically applied to at least two of these areas: Augmented Reasoning, Logical Reasoning, Generative AI, Education, and Healthcare Assistance.
- Candidate must have a proven research profile and consistent publication record in accredited journals, peer-reviewed conference proceedings, books or book chapters in line with the Unisa Research and Innovation Policy at this level.
- 5 years of teaching/work/relevant experience.
- A proven record of supervision of postgraduate Master's and Doctoral students to completion.
- Involvement in industry-based research, engaged scholarship and a proven record of attracting external funding.

- NRF rating.
- A proven track record of successful mentoring of Postdoctoral Fellows.

Requirements for Associate Professor:

- Candidate must have a proven track record in the field of Augmented Intelligence, specifically applied to at least two of these areas: Augmented Reasoning, Logical Reasoning, Generative AI, Education, and Healthcare Assistance.
- Candidate must have a proven research profile and consistent publication record in accredited journals, peer-reviewed conference proceedings, books or book chapters in line with the Unisa Research and Innovation Policy at this level.
- 4 years of teaching/work/relevant experience.
- A proven record of supervision of postgraduate master's students to completion or appropriate industry experience will be considered.
- Involvement in industry-based research, engaged scholarship and the ability to attract external funding.

Recommendations:

- NRF rating.
- A proven track record of successful mentoring of Postdoctoral Fellows.

Salary : Remuneration is commensurate with the seniority of the position

Assumption of duty: As soon as possible.

Enquiries : 011 670 9081 Mr J Maano

Closing Date : 11 July 2025 (Email application before close of business at 16:00).

Your <u>APPLICATION FORM FOR A PERMANENT ACADEMIC POST.docx</u> must be accompanied by a COMPREHENSIVE CURRICULUM VITAE and;

- identity document (including passport, work permit, permanent residence permit or proof of nationalisation
 if applicable) (certified copies within the previous six months);
- all educational qualifications (<u>certified copies within the previous six months</u>).
- academic transcripts/records (certified copies within the previous six months);
- proof of SAQA verification for <u>foreign qualifications</u> (*if applicable*) (<u>certified copies within the previous six months</u>)
- for ACADEMIC POSITIONS a teaching statement (refer to page 1 of advertisement).
- UNISA reserves the right to authenticate all qualifications without any further consent from the applicant.
- The contact details of <u>three contactable references</u> must be provided, one of which must be from your present employer excluding your current line manager if you are an internal Unisa applicant
- Late, incomplete and incorrect applications will not be considered.
- Unisa is not obliged to fill an advertised position
- Appointments will be made in accordance with Unisa's Employment Equity Plan and other applicable legislation.



We welcome applications from Persons with Disabilities

ACTIVITY:

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• Applications must be emailed to CSET2PA@unisa.ac.za

• If you apply for more than one position, each application must be on a separate email.



- Applications emailed to the wrong email address will not be considered.
- Late, incomplete and incorrect applications will not be considered.

All applications should reach UNISA before 16h00 on the closing date.

Correspondence will be limited to short-listed candidates only. If you have not been contacted within two months after closing date of this advertisement, please accept that your application was not successful.