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.

ACTIVITY;

<u>TEACHING STATEMENT:</u>

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

<u>Option A: External applicants and internal applicants (from non-academic positions)</u> – 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.

<u>Option B: Internal applicants (from academic positions)</u> –

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

ACTIVITY;

<u>The teaching statement must be supported by a portfolio of evidence which may be requested from short listed candidates at the interview.</u>
<u>Candidates are expected to submit a research reflection or portfolio</u>

ACTIVITY;

<u>APPLICATION FORM FOR A PERMANENT ACADEMIC POST</u>

☞ **The following positions exist in the various departments:**

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY

SCHOOL OF SCIENCE

DEPARTMENT OF MATHEMATICAL SCIENCES

FLORIDA-SCIENCE CAMPUS (FLORIDA)

FULL PROFESSOR (P5) X1: PURE MATHEMATICS

FULL PROFESSOR/ ASSOCIATE PROFESSOR (P5/P6) X1: ASTRONOMY

FULL PROFESSOR/ ASSOCIATE PROFESSOR (P5/P6) X1: FINANCIAL MATHEMATICS

SENIOR LECTURER (P7) X1: ASTRONOMY

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

Professor (X1): Pure Mathematics *(Ref.CSET/Re-Ad2/P-PMath/001-2023)*

Post specific requirements for <u>Professor</u>:
- A Doctorate degree or equivalent in Pure Mathematics
- 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 proven record of supervision of research Masters and 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:
- Ability to lecture 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.

Professor/ Associate Professor (X1): Astronomy *(Ref.CSET/Re-Ad4/P.AP-MathsAs/002-2023)*

Post specific requirements for Professor:
- A Doctorate degree or equivalent in Astronomy/Astrophysics
- 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 proven record of supervision of research Masters and Doctoral students to completion.

Field of Expertise for this position
- The candidate will need to be able to lead curriculum development of both new and existing modules. A passion for teaching and research in Astronomy is highly sought after.
- Experience in using optical telescopes will be a useful skill that will be utilised in the Unisa Observatory and in spearheading astronomy outreach events using our portable GOTO telescopes. The candidate should have an interest, and preferably experience, in using South African astronomical research facilities such as SALT, other optical/IR telescopes in Sutherland, MeerKAT, HESS, HERA or HIRAX.
- The candidate should have a track record of high-quality publications in Astronomy. Preference will be given to a radio astronomer and a candidate with research interests that align with the current research direction at Unisa.

Recommendations:
- Ability to lecture in an online environment.
- An NRF rating or proof of application thereof would be an advantage.

Post specific requirements for Associate Professor:
- A Doctorate degree or equivalent in Astronomy/Astrophysics
- 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 proven record of supervision of research Masters students to completion.

Field of Expertise for this position
- The candidate will need to be able to lead curriculum development of both new and existing modules. A passion for teaching and research in Astronomy is highly sought after.
- Experience in using optical telescopes will be a useful skill that will be utilised in the Unisa Observatory and in spearheading astronomy outreach events using our portable GOTO telescopes. The candidate should have an interest, and preferably experience, in using South African astronomical research facilities such as SALT, other optical/IR telescopes in Sutherland, MeerKAT, HESS, HERA or HIRAX.
- The candidate should have a track record of high-quality publications in Astronomy. Preference will be given to a radio astronomer and a candidate with research interests that align with the current research direction at Unisa.

Recommendations:
- Ability to lecture in an online environment.
- An NRF rating or proof of application thereof would be an advantage.

Professor/ Associate Professor (X1): Financial Mathematics *(Ref.CSET/Re-Ad4/P.AP-MathsFM/003-2023)*

Post specific requirements for Professor:
- A Doctorate degree or equivalent in Financial 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 proven record of supervision of research Masters and Doctoral students to completion.

Field of Expertise for this position
- A PhD in Financial Mathematics or closely related fields (such as Stochastic calculus, Stochastic partial differential equations Financial Engineering, Actuarial Science, or Quantitative Risk Management).
- The applicant will be expected to teach modules and supervise postgraduate students (MSc and PhD) in Financial Mathematics, in support of the Department's portfolio of transformation and postgraduate programmes in Financial Mathematics. Software Development Skills, i.e., Mathematical Programming in Python, Sage, Matlab, or C++ will be an added advantage.

Recommendations:
- Ability to lecture in an online environment.
- An NRF rating or proof of application thereof would be an advantage.

Post specific requirements for __Associate Professor:__
- A Doctorate degree or equivalent in Financial 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 proven record of supervision of research Masters students to completion.

Field of Expertise for this position
- A PhD in Financial Mathematics or closely related fields (such as Stochastic calculus, Stochastic partial differential equations Financial Engineering, Actuarial Science, or Quantitative Risk Management).
- The applicant will be expected to teach modules and supervise postgraduate students (MSc and PhD) in Financial Mathematics, in support of the Department's portfolio of transformation and postgraduate programmes in Financial Mathematics. Software Development Skills, i.e., Mathematical Programming in Python, Sage, Matlab, or C++ will be an added advantage.

Recommendations:
- Ability to lecture in an online environment.
- An NRF rating or proof of application thereof would be an advantage

Senior Lecturer (X1): Astronomy (*Ref.CSET/NEW/SL-Astronomy Math/004-2023)*

Post specific requirements for __Senior Lecturer:__
- A Doctoral degree or equivalent in Pure Mathematics plus experience/track record as a researcher for a position of Senior Lecturer
- 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
- We are interested in hiring a candidate with a research interest, technical skills and experience in radio astronomy and radio interferometry. Some experience in postgraduate supervision will be advantageous.

Recommendations:
- Ability to lecture in an online environment
- Participation in community engagement project

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY

SCHOOL OF ENGINEERING

DEPARTMENT OF CHEMICAL ENGINEERING

SCIENCE CAMPUS (FLORIDA)

SENIOR LECTURER (P7) X1

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

Senior Lecturer (X1): Chemical Engineering *(Ref.CSET/New/SL-CE/005-2023)*

Post specific requirements for Senior Lecturer:
- A BSc (Eng) or BEng in Chemical Engineering, or a BTech in Chemical Engineering.
- A Doctoral degree in Chemical Engineering or equivalent plus experience/track record as a researcher for a position of Senior Lecturer.
- Eligibility to register with the Engineering Council of South Africa as a Professional Engineer or Professional Engineering Technologist within 2 years effective appointment date.
- Minimum of 3 years relevant experience in the teaching and curriculum development of Chemical Engineering at undergraduate and postgraduate levels at a tertiary institution.
- 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:
- Interested in applications from all areas of Chemical Engineering but particularly interested in applications from candidates working in Engineering Education (ODeL), Catalysis, Process Design, Advanced and Applied Materials, Energy, Waste to Energy, Water and Wastewater Treatment.

Recommendations:
- Professional Registration with ECSA.
- A proven record of supervision of master's students.
- NRF rating or eligibility to apply for rating.
- Evidence of research grants obtained or applied for.
- Experience with reflexive/ODeL research.
- Participation in departmental, school, college and University committees including workplace. committees or task teams and voluntary associations.
- Participation in community engagement projects.
- Teaching Chemical Engineering Design modules (e.g., Equipment, Process, etc.).

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY

SCHOOL OF SCIENCE

DEPARTMENT OF CHEMISTRY

FLORIDA-SCIENCE CAMPUS (FLORIDA)

PROFESSOR/ ASSOCIATE PROFESSOR (P5/P6) X1: CHEMISTRY

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

Professor/ Associate Professor (X1): Chemistry *(Ref.CSET/New/P.AP-Ch/006-2023)*

Post specific requirements Associate Professor:
- A Doctoral degree in Chemistry with specialization in Physical Chemistry.
- Minimum of 4 years relevant experience in the teaching and curriculum development of Physical Chemistry at undergraduate and postgraduate levels at a tertiary institution.
- A proven research profile and consistent publication record in peer-reviewed conference proceedings, journals, book chapters or books in line with the Unisa Research and Innovation Policy at this level.
- Record of successful supervision of postgraduate dissertations and/or thesis of MSc and/or PhD students to completion.
- Participation in community engagement activities.

Field of Expertise:
- A record of accomplishment in the field of Physical Chemistry, with specialization in material science and/or electrochemistry.

Recommendations:
- Experience with teaching and learning in an ODeL environment.
- Active academic citizenship roles.
- Proven record of national/internarial collaborations.
- Success in securing research funding (internal or external).
- NRF rating or applied for rating.
- Registration with a professional body such as SACNASP.

Post specific requirements Professor:
- A Doctoral degree in Chemistry with specialization in Physical Chemistry.
- Minimum of 5 years relevant experience in the teaching and curriculum development of Physical Chemistry at undergraduate and postgraduate levels at a tertiary institution.
- A proven research profile and consistent publication record in peer-reviewed conference proceedings, journals, book chapters or books in line with the Unisa Research and Innovation Policy at this level.
- Record of successful supervision of postgraduate dissertations and thesis of MSc and PhD students to completion.
- Evidence of mentoring junior staff members, leadership in community engagement projects and success in securing external research funding.

Field of Expertise:
- A record of accomplishment in the field of Physical Chemistry, with specialization in material science and/or electrochemistry.

Recommendations:
- Experience with teaching and learning in an ODeL environment.
- Active academic citizenship roles.
- Proven record of international collaborations.
- Experience in multidisciplinary research activities.
- Industrial or government collaborations.
- NRF rated scientist.
- Registration with a professional body such as SACNASP.

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY **SCHOOL OF ENGINEERING** **DEPARTMENT OF ELECTRICAL ENGINEERING** **SCIENCE CAMPUS (FLORIDA)** **LECTURER (P8) X1**

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

Lecturer (X1): Electrical Engineering *(Ref.CSET/New/L-EE/007-2023)*

Post specific requirements for Lecturer:
- A Master s Degree in Engineering with special interest in Electrical Engineering or related field
- Eligibility to register with the Engineering Council of South Africa (ECSA) within 2 years of assumption of duties.
- A BSc or BEng in Electrical and Electronic Engineering, or a BTech in Electrical and Electronic Engineering.
- Minimum of 2 years relevant experience in the teaching Electrical and Electronic curriculum development of undergraduate and/or Postgraduate levels at a tertiary institution.

Field of Expertise:
- The candidate must have expertise in at least one of the following areas: Telecommunications or Data engineering.

Recommendations:
- Possession of a PhD qualification would be an advantage.
- Undergraduate Qualifications in Electrical Engineering
- Registration with ECSA will be an added advantage.
- Relevant teaching/work experience in the higher education sector with emphasis in an Open Distance e-Learning environment

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY
SCHOOL OF SCIENCE
DEPARTMENT OF CHEMISTRY
FLORIDA-SCIENCE CAMPUS (FLORIDA)
SENIOR LECTURER (P7) X1: CHEMISTRY /BIOCHEMISTRY EDUCATION

(ACADEMICS)	**CANDIDATES WITH A RESEARCH OR ACADEMIC BACKGROUND**
(NON-ACADEMICS)	**C A N D I D A T E S FROM**

Senior Lecturer (X1): Chemistry/ Biochemistry Education *(Ref.CSET/Re-Ad3/SL-ChEdu/008-2023)*

Post Requirements: Senior Lecturer
- PhD degree in Science Education with specialization in Chemistry or cognate field.
- MSc in Chemistry or master's degree in science education with specialization in Chemistry
- BSc Honours in Chemistry or BSc Honours in Science Education with Chemistry **OR**
- BSc Honours in Biochemistry or BSc Honours in Science Education with Life Science
- An extensive experience (minimum of 3 years) in the teaching and curriculum development of Science Education postgraduate levels at a tertiary institution.
- A 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.

- Record of successful supervision of postgraduate dissertations and/or thesis of MSc and/or PhD students
- Success in securing external research funding.

Field of Expertise:
- A proven track record in the field of Chemistry Education.

Recommendations:
- Experience with teaching in an ODL environment.
- Active academic citizenship roles.
- Proven record of collaborations.
- Experience in multidisciplinary research activities.

COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY

SCHOOL OF ENGINEERING

DEPARTMENT OF INDUSTRIAL ENGINEERING

SCIENCE CAMPUS (FLORIDA)

PROFESSOR/ ASSOCIATE PROFESSOR (P5/P6) X1

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

Professor/ Associate Professor (X1): Industrial Engineering *(Ref.CSET/Re-ad/P.AP-IE/009-2023)*

Post specific requirements Professor
- A Doctoral degree in Industrial Engineering or equivalent plus experience/track record as a researcher for a position of Professor
- A BSc or BEng in Industrial Engineering, or a BTech in Industrial Engineering
- A proven record of supervision of Masters 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, journal articles, or book chapters or books 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: Systems Engineering, Enterprise Architecture, Design for Manufacture, Material and Process Selection, Operation Research, Quantitative Techniques, Industrial Engineering Design, Industrial Accounting and Engineering Costing

Recommendations:
- Professional Registration with ECSA
- 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

Post specific requirements for Associate Professor
- A Doctoral degree in Industrial Engineering or equivalent plus experience/track record as a researcher for a position of Associate Professor.
- A BSc or BEng in Industrial Engineering, or a BTech in Industrial Engineering
- A proven record of supervision of Masters OR 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.
- 4 years teaching/work/relevant experience
- Proven research profile and consistent publication record in peer-reviewed conference proceedings, journal articles, or book chapters or books 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: Systems Engineering, Enterprise Architecture, Design for Manufacture, Material and Process Selection, Operation Research, Quantitative Techniques, Industrial Engineering Design, Industrial Accounting and Engineering Costing

Recommendations:
- Professional Registration with ECSA or registration in process
- 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

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	: 24 November 2023 *(Email application before close of business at 16:00).*	

Your **APPLICATION FORM FOR A PERMANENT ACADEMIC POST** 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 (certified copies within the previous six months).
- academic transcripts/records (certified copies within the previous six months);
- proof of SAQA verification for foreign qualifications (*if applicable)* (certified copies within the previous six months)
- **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 three contactable references 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:

- **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.