



African University of Science and Technology [AUST]
Knowledge is Freedom

FACULTY (ACADEMIC STAFF) VACANCIES

As part of its growth and development plans, the African University of Science and Technology has created new full-time faculty positions for appointment commencing January, 2018. Applications are invited from holders of a relevant Ph.D. degree (or other applicable doctoral degree) who also meet the additional requirements described further below.

The appointments shall be made at the level of Assistant Professor/Associate Professor in each of the five disciplines currently offered by the university, as listed below:

- ✧ **Computer Science and Computer Engineering**
- ✧ **Material Science and Engineering**
- ✧ **Petroleum Engineering**
- ✧ **Pure and Applied Mathematics**
- ✧ **Theoretical and Applied Physics**

Institutional Profile

Although situated in Nigeria and accredited by the Nigerian Universities Commission, the African University of Science and Technology (AUST) was established in 2007 in response to an initiative led by then Nigerian President Olusegun Obasanjo and late South African President Nelson Mandela, with support from the World Bank, to create a pan-African institution that would significantly contribute to the addressing sub-Saharan Africa's skills gap in Science, Engineering and Technology. AUST is therefore part of the growing network of special purpose Nelson Mandela Institutions, situated in different regions of the continent. While its long-term plans include the offering of some undergraduate programs, it currently only offers post-graduate programs at the Master's and doctoral levels, in the five disciplines listed above. A key consideration in selecting the disciplines to be offered was the need to provide skills in the carbon and non-carbon energy sectors of Africa's economies, although research and teaching activities now encompass other areas that represent both global quality and a focus on African problems, such as recent discoveries associated with the use of nano particles as a mechanism for drug delivery in cancer patients. AUST is one of the few institutions with the World Bank designation of "African Center of Excellence" and hosts regional network known as the Pan-African Materials Institute (PAMI) and is also a West African node for the Mathematics and Science for sub-Saharan Africa (MS4SSA) program, funded by the World Bank to improve the quality of teaching of Mathematics and Science in order to improve outcomes in STEM subjects.

While AUST now seeks to develop a strong corps of resident faculty, it will continue to use the instructional model that has made it so successful, namely, the use of carefully selected experts in different fields who come from institutions all across the globe to teach specific topics or courses over short durations. This modularised approach ensures high quality instruction and cross-fertilisation of research and instructional culture and experience in an affordable manner.

Position Description

The faculty will be expected to teach courses in the designated subject area engage in applied research and provide some supervisory services to support mainly Master's level students, although that does not preclude the possibility of supervising a small cohort of doctoral students, according to the individual's expertise. The ideal candidates will be able to teach at least 3 of the following courses in their discipline:

DISCIPLINE	COURSES
Computer Science & Engineering	Web and Mobile Engineering; Data Structures and Algorithms; Operating Systems; Distributed and Wireless Systems; Telecommunication Systems
Material Science & Engineering	Materials characterization and crystallography; Properties of Materials; Iron and steel making; Applied rock mechanics and excavation engineering Mining methods and machinery
Petroleum Engineering	Rock and fluid properties; Multiphase flow in pipes and Flow Assurance; Production Engineering; Formation Evaluation and Well-Logging
Pure and Applied Mathematics	Numerical Analysis for Partial Differential Equations; Theoretical PDE; Advanced Linear Algebra; Ordinary Differential Equations
Theoretical and Applied Physics	Mathematical Methods of Physics; Electromagnetism; Classical Mechanics; Quantum Mechanics; Statistical Mechanics

Other Qualifications:

- A very high level of fluency in English
- A high level of proficiency in the use of mainstream information technology packages and/or discipline-specific ones
- An acceptable number of recent publications in appropriate, top tier, peer-reviewed journals, including at least two papers published in the last two years
- A minimum of 3 years experience teaching or as a high level researcher in a competitive global environment
- Familiarity with the workings of some of the world's major higher education systems
- Evidence of ability to supervise post-graduate research
- In the Engineering disciplines, appropriate industrial experience would be an added advantage

To ensure full consideration, applicants should send the following documents electronically to the Office of Vice President (Academic) at vpa@aust.edu.ng by **17.00 (West African Time - GMT+2 hrs) of 30th September, 2017**:

- ✓ A letter of application (not exceeding 2 pages in length), stating the candidate's qualifications, experience and relevant arguments why they should be considered for the position
- ✓ A curriculum vitae which should focus on the applicant's tertiary education and relevant experience and key publications only
- ✓ The names and contact details of at least three professional referees
- ✓ Transcripts of graduate studies completed

Benefits and terms of appointment

At present, **AUST does not operate on a tenure system**. Therefore, these appointments shall be on a contract basis, 3 years at a time, in each case. The following benefits and terms shall apply to successful candidates:

- ✧ Competitive salaries payable in convertible currency
- ✧ Salary level shall be commensurate with experience and level of appointment
- ✧ High quality housing on campus at highly subsidized rental rates. There will be no option to convert the equivalent of the rent benefit to cash
- ✧ For candidates with school-age children, Abuja has high quality private schools, including specialist schools offering American and UK curricula, as well as French and German schools. The cost of children's education shall be for the appointees own account