

VACANCY ANNOUNCEMENT

Position: Tutor – Communication Systems Engineering

Duty Station

Nyamirembe, Chato, Geita.

Position Summary

The institution is seeking a qualified and experienced **Tutor – Communication Systems Engineering** to deliver high-quality theoretical and practical training in communication systems, electronics, networking, and instrumentation. The successful candidate will support student learning through classroom instruction, laboratory demonstrations, practical projects, and industry-oriented training.

Minimum Qualifications

Applicants must possess:

- A **Bachelor's Degree** in Communication Engineering, Telecommunications Engineering, Electronics Engineering, Electrical Engineering, Computer Engineering, or a closely related field;

OR

- A **Diploma/Fully Technician Certificate (FTC)/VETA qualification** in Communication Engineering, Telecommunications, Electronics, Electrical Engineering, or a related discipline **with at least five (5) years of relevant industrial experience**.

Experience

- Experience in teaching, technical training, or industrial practice in communication systems or related engineering fields.
- Demonstrated practical experience in communication equipment installation, operation, maintenance, or system design is highly desirable.

Key Responsibilities

The successful candidate will be responsible for:

- Delivering lectures, tutorials, laboratory sessions, and practical demonstrations.
- Preparing lesson plans, laboratory manuals, teaching materials, and assessments.
- Supervising student practical projects and industrial attachments.
- Maintaining laboratory equipment and ensuring safe laboratory practices.
- Participating in curriculum development and continuous improvement initiatives.
- Assessing students' academic performance and providing academic guidance.
- Supporting research, innovation, and consultancy activities where applicable.

Required Technical Competencies

The candidate should demonstrate sound knowledge and practical skills in most of the following areas:

Communication Systems

- Fundamentals of communication systems
- Elements of communication systems (Transmitter, Channel, Receiver)
- Analog and digital communication principles
- Analog and digital modulation techniques
- Communication system design

Transmission Technologies

- Coaxial cable
- Twisted pair cable
- Optical fiber communication
- Radio Frequency (RF) communication
- Microwave communication

Wireless Communication

- Cellular network planning
- Wi-Fi technologies
- 2G Core Network Architecture
- 3G Core Network Architecture
- 4G EPC
- 5G Core Network Architecture

Computer Networking

- Routing and switching
- TCP/IP networking fundamentals
- Network configuration and troubleshooting

Optical Communication

- Single-mode and multi-mode optical fibers
- Fiber optic communication systems
- FTTH (Fiber-to-the-Home)
- GPON technologies
- DWDM optical transport networks

Electronic Circuit Analysis

- AC and DC circuit analysis
- RLC circuits
- Circuit analysis techniques

Analog Electronics

- Diodes
- Bipolar and Field Effect Transistors
- Operational Amplifiers
- Analog Filters

Digital Electronics

- Number systems and digital codes
- Logic gates
- Combinational logic circuits
- Sequential logic circuits
- Finite State Machines (Mealy and Moore)
- Digital filters

Programming

Knowledge of at least one of the following programming languages:

- Python (preferred)
- C++

Engineering Software

Experience with one or more of the following:

- MATLAB
- VHDL
- Electronics Workbench (or equivalent electronic circuit simulation software)

Laboratory Instrumentation

Practical experience using:

- Oscilloscope
- Digital multimeter
- Voltmeter
- Ammeter
- Function generator and other standard electronic laboratory instruments

Desired Competencies

- Strong communication and presentation skills.
- Ability to integrate theory with practical applications.
- Commitment to student-centered learning.
- Teamwork and professional ethics.
- Ability to supervise laboratory work safely and effectively.

Salary and Benefits

This is a private institution. Remuneration will be offered in accordance with the institution's approved salary structure, which is **benchmarked against the Tanzania Government Service (TGS) Salary Scale**, taking into account the candidate's qualifications, experience, and responsibilities of the position

Application Procedure

Interested candidates should submit:

- Curriculum Vitae (CV)
- Copies of academic and professional certificates

To: **careers@rct.ac.tz**

If you do not receive an acceptance reply message from us in two days, please re-submit your application.