

THEOPHILUS ANKOMAH

Contact Address: AD103, KOTEI RD – Ghana || **Cell:** +233593491473 || **E-mail:** theophilusankomah05@gmail.com

STATEMENT OF QUALIFICATIONS

- BSc in Materials Engineering with research experience and interests in Composite Materials, Polymers and Biomaterials
- Proven analytical abilities shown in the creation of creative solutions for difficult societal issues
- Proven cooperation and communication skills demonstrated by participation in fruitful cooperative research projects

EDUCATION

Kwame Nkrumah University of Science and Technology (KNUST) **Kumasi, Ghana**
BSc. Materials Engineering – CWA: 70.04 (GPA: 2.89) **November 2024**

African Institute for Mathematical Sciences – Competition **Tarkwa, Ghana**
University Of Mines and Technology (UMaT) **March – 2020**
Selected based on academic merit as 1 of 3 students to participate in this program out of 1,000+ students during the International Day of Mathematics

Imperial College of Mines and Safety – Advanced Diploma **Kumasi, Ghana**
Completed occupational safety and health management, job hazard analysis, safety supervision and leadership, Emergency action plans and others **May –2022**

Advanced Professional College – Student **Kumasi, Ghana**
completed computer programming course, Python for software development **August- 2023**

Webbit Technologies – Student **Benin city, Nigeria**
Studied website development, Hosting, and Domain, Server Management and basic coding editing with WordPress. **June - 2023**

SELECTED HONOURS AND AWARDS

• Extraordinary achievement by developing Mohr's Circle software for solving stress state of materials, Materials Innovation Hub, Department of Materials Engineering, KNUST **2023**

RESEARCH EXPERIENCE

Bulk Nanocarbon (BNC) Reinforced Burnt Clay Brick Composite Project. Supervised by: Professor Albert Adjaottor **June – August 2022**
Collaborative Summer Research Project with Virginia Tech (VT) University
Bulk Nanocarbon (BNC) Reinforced Burnt Clay Brick Composite Project. Supervised by: Professor Albert Adjaottor

- Participated in research team of 15 students from KNUST and VT to formulate resilient clay bricks reinforced with charred sawdust for sustainable construction
- Carbonized lignocellulosic material (sawdust) to form bulk nanocarbon (BNC).
- Performed compressive strength tests on moulded briquettes to determine optimum combination ratios

Casting Design Analysis | Transforming Challenges into Solutions. **August 2021 – March 2022**
I spearheaded a dynamic team project focusing on the "Casting Design Analysis of Galamsay Plate)
Supervised by: Eng sekyere Bota.

- Led a team of 5 students from KNUST in performing pouring rate analysis on Galamsey plate.
- Sprue and Riser Optimization, employed engineering expertise to calculate the ideal size of the sprue and riser, critical components in the casting design for optimal material flow and solidification.
- Carried out literature review and testing of the samples.

Dental Implant.

Titanium for Dental implant. *Supervised by: Dr. Eric Kwame Anokye Asare*

March 2022

- led a team of 8 student from KNUST to select a suitable material that can be used for dental implant.
- The biocompatibility, light weight was a critical property in the selection process.
- Carried out the selection process with the use of advanced Granta Edu pack materials selection software.
- Suitable processing root was selected for the intended application.

Undergraduate Thesis

January – September 2024

Effects of Incorporating Treated and Non-treated (Palm Kernel Shell) PKS Into (High Density Polyethylene) HDPE Matrix composite

Supervised by: Dr. Eric Kwame Asare

- Led a team to fabricate HDPE/PKS composite materials from waste plastic and agricultural waste (PKS).
- Performed microscopy, Image J with Origin software to determine the average particle size of PKS.
- Formulated composites of PKS and recycled HDPE using extrusion-injection molding
- Characterized the properties of PKS using FTIR.
- Performed tensile, impact and Hardness tests on samples.
- Presented research findings at the department of Materials Science & Engineering, KNUST.

WORK EXPERIENCE

Chief Technological Educator, Glinax Company

March - 2024

- Tutored over 30 students with the skills and knowledge needed to thrive in the dynamic world of web development.
- encouraged hands-on approach, my students not only grasp the concepts but also built a strong portfolio showcasing their capabilities.
- Coached 6 Tech teams to build official website, glinax.com with 100% acceptance
- Coached 5 student to build glinax bot on Telegram, (Glinax Prime) to store and deliver past questions, pdfs for student in KNUST.

Ghana Manganese Company Ltd.(GMC)

September – December, 2023

- Worked as plant maintenance as a trainee materials engineer.
- Actively contributed to the efficient operation of the facility by applying my expertise in materials engineering to enhance the lifespan and performance of various equipment and structures
- Conducted thorough Non-Destructive Testing (NDT) specifically visual inspection of plant equipment, utilizing my knowledge of materials science to assess wear and tear, corrosion.

Samartex Wood Processing Company Of Ghana

October - December, 2022

- Worked at the workshop with using the lathe machine, Drilling machine and the other equipment for sizing, drilling and shaping of mechanical parts.
- Contributed to the efficient operation of the Saw mill by checking and replacing the defected part by applying my expertise in materials engineering to enhance the lifespan and performance.
- Gained experience in the use of the hot-pressing machine for compacting the sliced wood pieces for composite plywood.

PRESENTATIONS AND INVITED TALKS

- Effects of Incorporating Treated and Non-treated (Palm Kernel Shell) PKS Into (High Density Polyethylene) HDPE Matrix. Composite Materials Presentation at the Department of Materials Engineering, KNUST. April 2, 2024
- The use of cornstarch for baby diapers, Innovation challenge, materials innovation hub, department of materials engineering KNUST. March - 2023
- The use of titanium for dental implant, materials engineering department, KNUST. August - 2022

VOLUNTEERING, LEADERSHIP, AND EXTRACURRICULAR ACTIVITIES

Tech head, STEM tutor, glinax company, KNUST campus.

February – April, 2024

Tutored and empowered over 40 college students in STEM

Pear facilitator, carrier fair at Ejisuman SHS, Pakoso SHS

2023, 2024

Empowered them with the benefits, carrier opportunities and the need for learning computer programming as far as technology is concern.

Science Tutor, Azure's Special College

2023

Tutored, and prepared over 30 students at the secondary level to write NOVDEC and WASSCE.

Mathematics Tutor, Great Lincoln Academy

2021

Mentored 50 Junior High School students from Western Region, Asankrangwa to prepare for their final exams (BECE)

SKILLS AND INTERESTS

Laboratory: Microscope, Extrusion & Injection Molding, FTIR.

Software: Python, HTML, Canva, Word press, Granta Edu pack, Microsoft power point and word.

Instrument/music: keyboard, Drums, Saxophone, Base-guitar.

REFERENCES

Available upon request