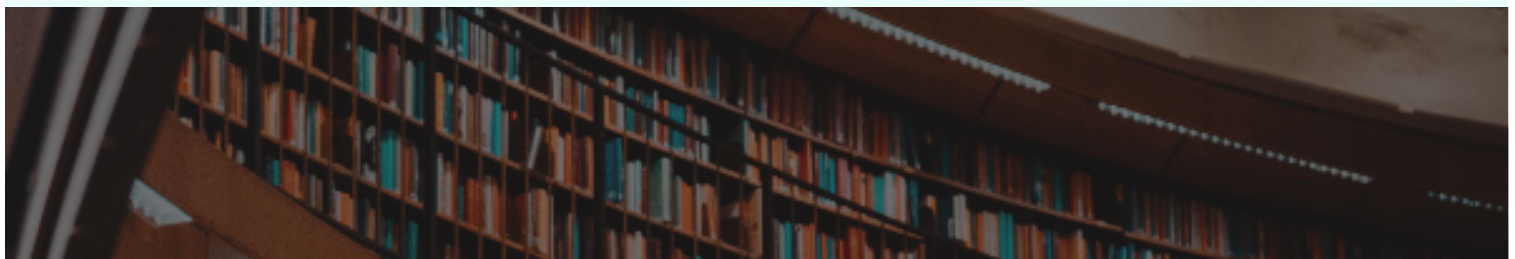


**Kwame Nkrumah  
University of Science  
and Technology**

WORLD BANK AFRICAN CENTRE OF EXCELLENCE

# **MASTER OF SCIENCE IN ENVIRONMENTAL SANITATION AND WASTE MANAGEMENT**



# **MASTER OF SCIENCE (MSC) IN ENVIRONMENTAL SANITATION AND WASTE MANAGEMENT**

## **RWESCK World Bank African Centre of Excellence, Kwame Nkrumah University of Science and Technology Kumasi-Ghana**

This programme is hosted in the Department of Civil Engineering (DCE) in collaboration with the School of Graduate Studies of the Kwame Nkrumah University of Science and Technology. The Regional Water and Environmental Sanitation Centre (RWESCK) works with the Department of Civil Engineering to strengthen the research, education and competency of sector professionals to deal with the issues of environmental Sanitation and waste management.

### **Aims and Objectives**

This MSc programme in Environmental Sanitation and Waste Management aims at strengthening the practical competency of WASH professionals from Ghana and the Sub region to deal with issues of environmental sanitation and waste management, through practical approaches to planning, design, operation and management. The programme seeks to equip MSc students with knowledge, skills and competences to solve environmental sanitation and waste management problems through the development and implementation of innovative and sustainable approaches.

The objectives of the MSc programme are to equip students to:

- Plan, design, operate and manage environmental sanitation and waste management delivery.
- Conduct feasibility and engineering designs for construction of environmental sanitation and waste management systems
- Communicate technologies and technical issues on environmental sanitation and waste management systems
- Play essential roles in government institutions and the private sector for sustained environmental sanitation and waste management delivery.
- Comprehend within the myriad of challenges, the critical role of climate change and behavioural change towards achieving sustainable environmental sanitation and Waste Management sector and by extension attainment of SDGs 6 and 13.

## Taught Courses and Research

Students will undertake nine (9) months taught courses and three (3) months project work and submit a project work report in partial fulfilment for the award of the MSc degree.

Students will undertake three months project work related to environmental sanitation technologies and management and submit a project report in partial fulfilment for the award of the MSc degree. To achieve this, students will apply their knowledge from earlier modules to undertake a detailed project work on environmental sanitation technologies issues in Ghana and write a report. Students will be guided by their supervisors but the work will be their own and they will take responsibility for the design, planning and execution of the project. The course also includes two seminars where students will present and defend their project work and discuss the results of their study. Formal assessment will be the final Postgraduate defence.

Table 1: Programme structure of MSc in Environmental Sanitation and Waste Management

Course Code	Course Name	T (hr)	P (hr)	C(hr)
<b>Year one Semester 1</b>				
CEES 511	Environmental and Public Health	2	0	2
CEES 513	Environmental and Social Impact Assessment	2	0	2
CEWE 515	GIS and Remote Sensing in Water and Environmental Systems	2	2	3
CEWE 517	Applied Hydraulics	2	0	2
CEES 519	Environmental Chemistry and Microbiology	2	2	3
CEES 521	Environmental Quality Analysis and Instrumentation	1	2	2
CEES 523	Onsite Sanitation and Faecal Sludge Management	2	2	3
<b>Total Credits for Semester 1</b>		<b>12</b>	<b>8</b>	<b>17</b>

Course Code	Course Name	T (hr)	P (hr)	C(hr)
<b>Year 1 Semester 2</b>				
CEES 524	Wastewater Management and Sewerage	2	2	3
CEES 526	Integrated Solid Waste Management	2	2	3
CEWE 528	Research Methods	2	0	2
CEWE 530	Engineering Economy and Entrepreneurship	2	0	2
CEWE 532	Project Management and Evaluation	2	0	2
CEES 613	MSc Project Work	0	16	8
<b>Total Credits Semester 2</b>		<b>9</b>	<b>16</b>	<b>20</b>
<b>Total Course Credits</b>		<b>21</b>	<b>24</b>	<b>37</b>

## Admission Entry requirements

The basic entry requirements into the programme are those specified by the University as detailed below:

1. First Class or Second Class (Upper Division) degree or its equivalent from a recognized University in Civil, Chemical Engineering, Chemistry, Environmental Science, Water and Sanitation, Agriculture, Biological Science, Environmental Health and Sanitation and BSc Natural Resource Management any field of specialisation relevant to the water supply industry.
2. Applicants with qualifications other than those specified in (1) above shall be interviewed and if found necessary, would be required to take a written examination before admission.
3. Applicants whose working language is not English must show that they have good command of both spoken and written English. Proficiency in English: Must have first degree with English language as the medium of instruction, OR Must have an internationally recognised Certificate of Proficiency in English Language (TOEFL or IELTS) with above average score.

## Graduation requirements

1. The minimum time for the completion of the full time MSc (Environmental

Sanitation and Waste Management) programme shall be 12 months. The first 8 months will be dedicated to lectures with the remaining 4 months dedicated to a detailed project work.

2. The programme may also be taken over a 2-year period for part-time students and the MSc. degree awarded after meeting all the requirements specified.

3. Each student is supposed to undertake a detailed project work under the guidance of a university lecturer leading to an examinable thesis which will be defended during an oral examination.

4. Students will be required to attend seminars given by professionals from industry, and take part in field trips organized as part of the programme.

5. The minimum number of credit hours required for graduation is 37 credit hours.

6. The pass mark for any course subject shall be 50% and the minimum Cumulative Weighted Average (CWA) for graduation shall be 55%.

## Mode of Application

Sale of E-Vouchers for admission is in progress

•Purchase e-Voucher for **GHc280.00** at the following banks: **GCB, CBG or ECOBANK** or **dial \*447\*160#** on any network and follow the prompts

•Upon payment of the application fee, candidates will receive an e-Voucher containing

•an application number and PIN that will grant access to the on line admissions portal

•Candidates should then proceed to online admissions website: <https://apps.knust.edu.gh/admissions/> and begin the application process

•Once the process has been completed, candidates **MUST PRINT OUT 2 COPIES** of the completed application form from the portal and submit them (by post) to the School of Graduate Studies together with all relevant documents (Photocopies of Certificates,

•Recommendation Letters, and Transcript for those attending KNUST for the first time) to the following address:

**THE SECRETARY**

**SCHOOL OF GRADUATE STUDIES**

**(KNUST, KUMASI-GHANA)**

**Deadline for submission of application forms is 31st October, 2022.**

Application forms submitted after the deadline will not be processed.

Admissions will be preceded by an interview. Students awaiting results can apply!

NB: All International Applicants must use this link: <https://apps.knust.edu.gh/admissions/apply/Account/Register> to generate logins and apply online.

Contact RWESCK Office **+233 (0)54 807 9278** for more information or Visit <https://rwesck.org/education/>