WATER INSTITUTE

Water Institute is fully Accredited by the
National Council for Technical and Vocational Education and Training (NACTVET)

PROSPECTUS 2024/2025

Start your future with us

Water Institute (WI) is committed in providing a learning environment that promotes a passion for excellence in professionalism and enduring knowledge which stimulates creativity and innovation consistent with the country and regional realities. We embrace Competence Based Education and Training (CBET) approach. The Institute is fast establishing itself as the ideal tertiary institution for the holistic students' development. We are focused on nurturing the growth of academic excellence and instilling the importance of scientific and engineering skills and entrepreneurship

OUR MOTTO

MAJI KWA MAENDELEO

MESSAGE FROM THE RECTOR

Dr. Adam O. Karia (PhD)

Water Institute is solely a technical training institution focusing on developing technical human resources capacity that is needed in the water sector. It is fully accredited by NACTVET to offer technician and engineering programs leading to the qualifications of National Technical Awards (NTA) i.e. Basic Technician Certificate (NTA Level 4), Technician Certificate (NTA Level 5), Ordinary Diploma (NTA Level 6), Higher Diploma (NTA Level 7), Bachelor Degree (NTA Level 8) and Masters Degree (NTA Level 9) respectively.

Water Institute is a global partner in developing the required technical human resources capacity for the development and management of water resources.
The distribution of this prospectus is expected to reach all prospective clients and partners in Tanzania and beyond the borders.

Currently, WI through various projects has procured modern equipment which ensures the development of competences and high-quality education. We therefore invite all prospective students from Tanzania, and beyond to join our training programmes in any of the fields and educational levels shown in this prospectus. We also invite our stakeholders in need of advisory/consultancy services in areas of water resources management and development.

VISION

A leading Institution for providing technical education and training in water and sanitation for sustainable development

MISSION

To deliver state of art quality products and services in technical education, training, research and consultancy for sustainable water management

SLOGAN

Wataalamu wa Maji kwa Maendeleo Endelevu

PHILOSOPHY

Water expertise for sustainable development

CORE VALUES

Teamwork: We work as a group of individuals passionately committed and focused to meet our goal

Professionalism: We perform our duties by using the highest standard of skills and expertise to create a better world

Accountability: We are responsible for our actions and rendered services

Integrity: We are honest, fair and transparent - free from bias and favouritism in delivering services to our customers

Innovation and creativity: We strive to invent and adopt emerging technologies to improve our products and service delivery

Customer focused: We are committed to deliver timely and high quality customer services

WI will meet the following objectives:

a) To provide high quality training programmes on water management and technology;
b) To undertake consultancy services and research in the water sector; and
c) To provide an efficient management of the Institutes' resources.

STRATEGIC CHOICE

The strategies to be followed to accomplish the Institute's vision and objectives are driven by a set of strategic decisions made by the management of the Institute. The main strategic choices giving direction to the Institute's approach for the coming years are presented in this chapter.

a) Expansion and growth.
b) Ensuring curricula and quality of education and training do absolutely respond to the needs and expectations of the main actors in the sector.
c) Modernise and professionalise management and support functions.
d) Make more efficient use of existing resources
e) Reduce the Institute's financial dependency on the Ministry of Water and Irrigation

TABLE OF CONTENT

THE MINISTERIAL ADVISORY BOARD

Dr. Rehema Nchimbi (Chairperson),
Senior retired Lecturer,
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Lucy Engels Mrikaria (Member),
Chief Internal Auditor,
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Joyce Ally Msiru (Member),
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Ministry of Water,
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Dr. Said Mohammed Ally (Member),
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DAR ES SALAAM.

Dr. Masudi Athumani Senzia (Member),
Manager,
Environmental Management Unit,
Rural Water Supply and Sanitation Authority (RUWASA),
P.O. Box 412,
DODOMA.

WATER INSTITUTE MANAGEMENT

Rector/Chief Executive Officer

Dr. Adam O. Karia: PgD in Leadership at Uongozi Institute Technician (Dar es Salaam), PhD in Business Administration (Kisii University – Kenya), MSc in IT & Management PgD in IT and Management (India), Advanced Diploma in IT (UK), Diploma in Water Supply Management (Germany), Diploma in Technical Education (Kleruu) and Certificate in Civil Engineering (Misungwi).

Deputy Rector- Planning, Finance and Administration

Dr. William Senkondo: PhD in Physical Geography (Stockholm University – Sweden), MSc. in Water Science and Engineering (UNESCO-IHE Netherlands and BSc. in Civil and Water Resources Engineering (UDSM).

Deputy Rector- Academic, Research and Consultancy

Eng. Dr. Tulinave B. Mwamila; PhD in Civil and Environmental Engineering, (Seoul National University, South Korea) and MSc. in Water Resources Engineering (UDSM) and BSc. in Civil & Water Resources Engineering (UDSM).

HEADS OF UNITS

Legal Services Unit

Head of Unit: ***Adv. Adelina Rogath Massae:*** Master of Law (LLM) in General Law (KIU-Tanzania), Bachelor of Laws (LLB) (KIU- Uganda), Postgraduate Diploma in Legal Practice (The Law School of Tanzania).

Internal Audit Unit

Ag. Head of Unit: ***CPA (T) Japhet Simon Mtigile:*** CPA (T) - NBAA Tanzania and Bachelor Degree in Business Accounting and Finance (MU Tanzania).

Quality Assurance Assurance Unit

Head of Unit: ***Mr. Sylvanus Alfred Ntirumolekwa:*** MSc. in Medical Radiation Physics (Swansea, UK) BSc. in Physics and Chemistry (UDSM)

Procurement Management Unit

Head of Unit: ***Dr. Christopher Peter Nditi: PhD in Applied Management and Decision Sciences (Information System Management) – (Walden***

University – USA) CPSP – Master of Information Systems Management (Keller Graduate School of Management), Master of Networks and Communications Management (Keller Graduate School of Management), (PSPTB Tanzania), BA-Procurement and Logistics Management (MU - Morogoro) and Diploma in Accountancy (CBE Tanzania).

Communication and Marketing Unit

Ag. Head of Unit: *Dr. Ghanima Hamisi Chanzi:* PhD in Environmental Science (OUT – Tanzania), MSc. in Water Resources Engineering (UDSM) and BSc. in Environmental Laboratory Science Technology (ARU Tanzania).

ICT Unit

Ag. Head of Unit: *Mr. Dickson Anael Mwanyika* MSc in Computer Application Technology (Central South University-China), PgD in Computer Application Systems (Central South University-China), Bachelor of Library and Information Studies (Makerere University), Diploma in Information Systems (Dublin University).

DIRECTORATES

Director of Academics: *Dr. Lusajo Henry Mfwango*, PhD in Water Management (Hydrology and Water Resources Management) (ACEWM, Addis Ababa) MSc. Tech. in Irrigation Water Management (IIT – Roorkee, India), BSc in Food Science and Technology (SUA).

Director of Academic Support Services: *Ms. Neema Aaron Mpayo*: MA with Education (UDSM), BA with Education (UDSM), Diploma in Education (Mpwapwa TTC).

MANAGERS

Singida Campus

Eng. Stephano Mambuye Alphayo: MSc. Tech. in Environmental Management of Rivers and Lakes (IIT – Roorkee, India), R. Engineer (T) and BSc. in EnvironmentalEngineering (ARU Tanzania).

Ngurdoto Defluoridation Research Centre Manager

Dr. Mihayo Nkinda Sahani: Ph.D in Environmental Science & Engineering (NM-AIST) MSc. in Chemistry (UDSM), BSc. General (OUT Tanzania), FTC in Water Resources Eng. (RWI).

Manager Human Resource Management and Administration

***Mr. Felix Elliah Staki*:** Master of Human Resource Management (OUT-Tanzania), BA Public Admnistration (Mohanlal Sukhadia University, India), PGD in Human Resource Management (CBE) and PHR Certificate (TPSC – Tanzania).

Manager Research, Consultancy and Publication

Dr. Josephine John Gobry: PhD in Environmental Sciencs (UDSM – Tanzania), MSc. in Integrated Water Resources Management (UDSM), BSc with Education (UDSM) and Diploma in Education (DTC).

Manager Planning and Finance

Ms. Regina Vicent Sekao: MBA in Corporate Management (MU Morogoro), BA in Accounting and Finance (MUCCOBS Kilimanjaro) and Diploma in Cooperative and Management Accounting (MUCCOBS Kilimanjaro).

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CHAPTER ONE

1.0 INTRODUCTION TO WATER INSTITUTE

1.1 Brief Information about Water Institute

The Water Institute is a Government Agency established under the Executive Agencies Act Cap. 245 by the Government Notice (GN) No. 138 published on 22nd August, 2008 as amended by the GN. No. 216 of July 8th 2016. The WI was an offshoot of former Rwegarulila Water Resources Institute (RWRI), which also came from the name Water Resources Institute (WRI) that was established in 1974 in order to supply the middle level technical workforce needed to implement the Rural Water Supply Programme.

In 1980 Water Resources Institute was renamed as Rwegarulila Water Resources Institute. This change was in honor of the late Fredrick Rwegarulila, the then Principal Secretary in the Ministry of Water, who played a pivotal role in establishment of the Institute and development of the water sector in general. This came as one of the resolutions during the 1980's Annual Water Experts' Conference (AWEC) held in Tanga.

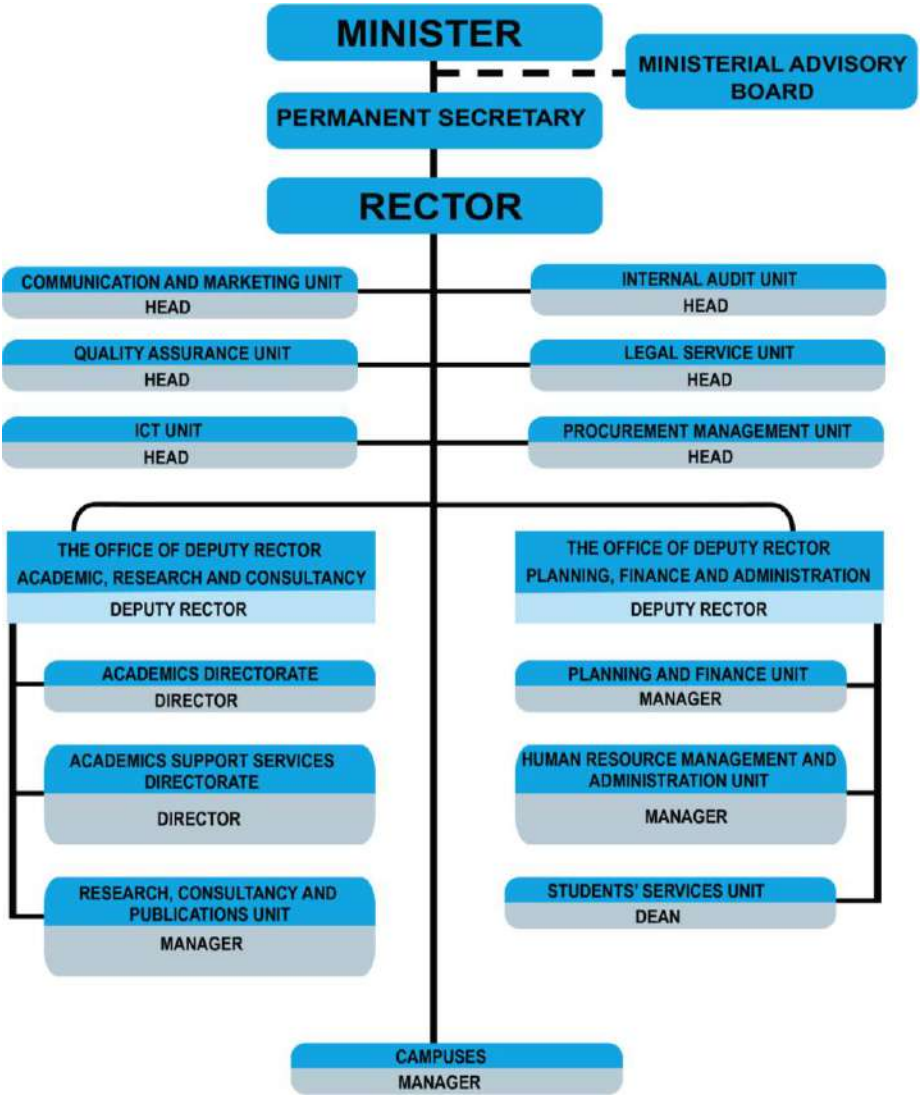
Following reforms in the public sector, which were geared towards improving service delivery among interventions undertaken by the Government, some of Government functions were delegated to semi - autonomous bodies such as Executive Agencies. The RWRI being one of the Ministry of Water and Irrigation units, was transformed into an Executive Agency on the 22nd August 2008 with the new name of "Water

Development and Management Institute" (WDMI) as amended by the Government Notice No. 216 published on July 08, 2016.

1.2 Organization Structure of WI

The Rector is the Chief Executive Officer of the Institute who is assisted by two Deputy Rectors, Head of Departments and Units. The Rector, Deputy Rectors and Head of Units shall constitute the Management Team of the WI.

The WI Management Team, with technical and professional support employees, shall establish standards, systems and procedures for resources management and utilization, capacity building, coordination of the Institute training programs, consultancy and research services, and monitoring and evaluating the performance of operations. Organization structure of WI is shown in figure 1.2.



Footnote:
MAB – Ministerial Advisory Board
ARC- Academics Research and Consultancy PFA –Planning, Finance and Administration
ICT– Information and Communication Technology M&E - Monitoring and Evaluation

Figure 1.2: Water Institute Organization Structure

1.3 Organization of the Prospectus

This prospectus provides an outline of the academic programmes currently offered by WI at the levels of Ordinary Diploma, Bachelor and Masters Degree towards the realization of the mission of the Institute with respect to training in Chapter 2. It also provides information on procedures and regulations for admission to such programmes and the corresponding fees in Chapters 3 and 4 respectively.

Chapter 5 provides Students' Academic Assessment Regulations for NTA levels 4, 5, 6, 7, 8 and 9. These detail the course of action to be taken on all matters related to examinations conducted by the Institute for programmes leading to the awards of NTA 4, 5, 6, 7, 8 and 9 levels namely; the Ordinary Diploma, the Bachelor Degree and Masters Degree.

Chapter 6 gives the profiles of academic departments and other related units of the Institute to include a list of academic staff and course outlines for academic programmes offered by respective Departments.

The inputs of the Prospectus as highlighted above are complemented with some additional and general information such as Academic Calendar for the Academic year 2023/2024 in Chapter 8 and the Students By-Laws under Chapter 9.

CHAPTER TWO

2.0 ACADEMIC PROGRAMMES OFFERED

2.1 Introduction

WI is fully accredited by (NACTVET) to run and grant awards (Technician and Engineering programmes) to successful candidates. Awards offered are NTA level 4, 5 and 6 (Ordinary Diploma), 7 and 8 (Bachelor Degree) and 9 (Masters Degree).

2.2 Basic Technician Certificate and Technician Certificate

The Basic Technician Certificate and Technician certificate are part of the Ordinary Diploma. Students who wish to exit or fail to attain an Ordinary Diploma but have successfully fulfilled the requirements for awards of Basic Technician Certificate (NTA 4) or Technician Certificate (NTA 5) shall be awarded the awards qualified for.

2.3 Ordinary Diploma Programmes

(i) Ordinary Diploma in Water Supply Engineering
(ii) Ordinary Diploma in Hydrology and Meteorology
(iii) Ordinary Diploma in Hydrogeology and Water Well Drilling
(iv) Ordinary Diploma in Irrigation Engineering
(v) Ordinary Diploma in Water Quality Laboratory Technology
(vi) Ordinary Diploma in Sanitation Engineering

(vii) Ordinary Diploma in Operation and Maintenance of Water Systems Engineering

(viii) Ordinary Diploma in Quantity Surveying for Water and Sanitation

(ix) Ordinary Diploma in Pump Mechanics Engineeering

(x) Ordinary Diploma in Plumbing Engineering

(xi) Ordinary Diploma in Geomatics for Water and Civil Work Management

(xii) Ordinary Diploma in Community Deveopment for Water and Sanitation

2.4 Higher Diploma

This is part of the Bachelor degree. Students who wish to exit or fail to attain Bachelor Degree but have successfully fulfilled the requirements for the awards of a Higher Diploma shall be awarded the Higher Diploma (NTA 7).

2.5 Bachelor Degree (NTA Level 8) Programmes

(i) Bachelor Degree in Water Resources and Irrigation Engineering,

(ii) Bachelor Degree in Sanitation Engineering,

(iii) Bachelor Degree in Community Development for Water Supply and Sanitation,

(iv) Bachelor Degree in Hydrogeology and Drilling and

(v) Bachelor Degree in Engineering Hydrology

(vi) Bachelor Degree in Plumbing And Service Engineering

(vii) Bachelor Degree in Quantity Surveying for Water and Sanitation

(viii) Bachelor Degree in Water Quality and Laboratory Technology

(ix) Bachelor Degree in Water Supply Engineering

The programmes run in 6 semesters which is three academic years.

2.6 Master Degree (NTA 9) Programmes

(i) Master of Water Resources and Utility Management

(ii) Master of Water Supply and Sanitation Engineering

(iii) Master of Sanitation Management

(iv) Master of Water Quality and Laboratory Management

CHAPTER THREE

3.0 ADMISSION REGULATIONS

3.1 Basic Technician Certificate

3.1.1 Direct Entry

The minimum admission qualifications for direct entry are as follows:

3.1.1.1 Water Supply Engineering

a) Holder of Ordinary Certificate of Secondary Education (OCSE) with four passes in non-religious subjects including three passes (D Grade) in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture, Food and Nutrition; and Geography; or

b) Holder of OCSE with two passes (D grade) in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture, Food and Nutrition; and Geography and holder of National Vocational Award (NVA) level 3 in a field related to Civil Engineering or Water Resources Engineering.

3.1.1.2 Hydrology and Meteorology

a) Holder of Ordinary Certificate of Secondary Education (OCSE) with four passes in non-religious subjects including three passes (D Grade) in any of the following subjects: Mathematics,

Physics/Engineering Science, Chemistry, Biology, Agriculture, Food and Nutrition; and Geography; or

b) Holder of OCSE with two passes (D grade) in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture, Food and Nutrition; and Geography and holder of National Vocational Award (NVA) level 3 in a field related to Civil Engineering or Water Resources Engineering.

3.1.1.3 Hydrogeology and Water Well Drilling

a) Holder of Ordinary Certificate of Secondary Education (OCSE) with four passes in non-religious subjects including three passes (D Grade) in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture and Geography; or

b) Holder of OCSE with two passes (D grade) in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture and Geography and holder of National Vocational Award (NVA) level 3 in a field related to Civil Engineering or Water Resources Engineering.

3.1.1.4 Water Quality Laboratory Technology

a) Holder of Ordinary Certificate of Secondary Education (OCSE) with four passes in non-religious subjects including three passes (D Grade) in any of the following subjects: Mathematics,

Physics/Engineering Science, Chemistry, Biology, Agriculture and Geography; or

b) Holder of OCSE with two passes (D grade) in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture, Food and Nutrition; and Geography and holder of National Vocational Award (NVA) level 3 in a field related to Water Quality Technology.

3.1.1.5 Irrigation Engineering

a) Holder of Ordinary Certificate of Secondary Education (OCSE) with four passes in non-religious subjects including three passes (D Grade) in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture and Geography; or

b) Holder of OCSE with two passes (D grade) in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture, Food and Nutrition; and Geography and holder of National Vocational Award (NVA) level 3 in a field related to Agricultural Science or Irrigation Engineering.

3.1.1.6 Sanitation Engineering

a) Holder of Ordinary Certificate of Secondary Education (CSE) with four passes (D grade) in non-religious subjects three of which should be in any of the following subjects: Mathematics,

Physics/Engineering Science, Chemistry, Biology, Agriculture and Geography; or

b) Holder of Ordinary Certificate of Secondary Education (CSE) with two passes (D grade) in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture and Geography AND holder of National Vocational Award (NVA) level 3 in a related fields

3.1.1.7 Operation and Maintenance of Water Systems Engineering

a) Holder of Ordinary Certificate of Secondary Education (CSE) with four passes (D grade) in non-religious subjects three of which should be in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture and Geography; or

b) Holder of Ordinary Certificate of Secondary Education (CSE) with two passes (D grade) in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture and Geography AND holder of National Vocational Award (NVA) level 3 in a related fields

3.1.1.8 Quantity Surveying for Water and Sanitation

a) Holder of Ordinary Certificate of Secondary Education (CSE) with four passes D Grade mathematics being compulsory) in non-religious subjects three of which should be in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture and Geography; or

b) Holder of Ordinary Certificate of Secondary Education (CSE) with two passes (D grade mathematics being compulsory) in any of the following subjects: Mathematics, Physics/ Engineering Science, Chemistry, Biology, Agriculture and Geography and holder of National Vocational Award (NVA) level 3 in related fields

3.1.1.9 Pump Mechanics Engineeering

a) Holder of Ordinary Certificate of Secondary Education (CSE) with four passes (D Grade) in non-religious subjects three of which should be in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture and Geography; or

b) Holder of Ordinary Certificate of Secondary Education (CSE) with two passes (D grade) in any of the following subjects: Mathematics, Physics/ Engineering Science, Chemistry, Biology, Agriculture and Geography and holder of National Vocational Award (NVA) level 3 in related fields.

3.1.1.10 Plumbing Engineering

a) Holder of Ordinary Certificate of Secondary Education (CSE) with four passes (D Grade) in non-religious subjects three of which should be in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Biology, Agriculture and Geography; or

b) Holder of Ordinary Certificate of Secondary Education (CSE) with two passes (D grade) in any of the following subjects: Mathematics, Physics/ Engineering Science, Chemistry, Biology, Agriculture and Geography and holder of National Vocational Award (NVA) level 3 in related fields

3.1.1.11 Geomatics for Water and Civil Work Management

a) Holder of Ordinary Certificate of Secondary Education (CSE) with four passes (D Grade) in non-religious subjects three of which should be in any of the following subjects: Mathematics, Physics/Engineering Science, Chemistry, Computer science and Geography; or

b) Holder of Ordinary Certificate of Secondary Education (CSE) with two passes in any of the following subjects: Mathematics, Physics/ Engineering Science, Chemistry, Computer science, and Geography and holder of National Vocational Award (NVA) level 3 in surveying (Geomatics).

3.1.1.12 Community Deveopment for Water and Sanitation

a) Holders of Certificate of Secondary Education Examination (CSEE) with at least four (4) passes in non-religious subjects; or

b) Holder of Ordinary Certificate of Secondary Education (CSE) with two passes in any non-religious subjects and holder of National Vocational Award (NVA) level 3 in related field.

3.2 Technician Certificate

The minimum admission qualification for entry to Technician Certificate studies is possession of Basic Technician Certificate in the relevant field. There is no indirect entry route.

3.3 Ordinary Diploma

The minimum admission qualification for entry to Ordinary Diploma studies is possession of Technician Certificate in the relevant field. There is no indirect entry route.

3.4 Higher Diploma

The minimum admission qualifications are as follows:

3.4.1 Water Resources and Irrigation Engineering

a) Holder of Ordinary Certificate of Secondary Education (OCSE) with four passes in non-religious subjects; and Ordinary Diploma in either of the following fields: Water Supply and Sanitation Engineering, Hydrogeology & Well Drilling, Hydrology & Meteorology, Water Quality Laboratory Technology, Civil Engineering, Irrigation Engineering, Water Resources Engineering, Civil Engineering with Community Development, Irrigation, Agriculture Engineering, Environmental Engineering, Environmental Engineering and Management in Mines, Highway Engineering, Hydraulic and Water Resources Engineering Agro mechanization, Mechanical Engineering, Electrical and Electronics Engineering, Chemical Engineering, Sanitation Engineering, Crop Production, Land Use Planning or General Agriculture with minimum GPA (NTA 6) of 3.0; or

b) Holder of Foundation Program (Science) Certificates from Open University of Tanzania for those students with GPA of less than 3.0 in above diploma programs; or

c) Holder of Full Technician Certificate (FTC) in either of the following fields: Water Supply and Sanitation Engineering, Hydrogeology & Well Drilling, Hydrology & Meteorology, Water Quality Laboratory Technology, Civil Engineering, Irrigation Engineering, Water Resources Engineering, Civil Engineering with Community Development, Irrigation, Agriculture Engineering, Environmental Engineering, Environmental Engineering and Management in Mines, Highway Engineering, Hydraulic and Water Resources Engineering Agro mechanization, Mechanical Engineering, Electrical and Electronics Engineering, Chemical Engineering, Sanitation Engineering, Crop Production, Land Use Planning or General Agriculture with minimum average score of 3.0 points (C grade) based on the following conversion scale: A=5, B=4, C=3, D=2; or

d) Holder of Advanced Certificate of Secondary Education (ACSE) with Two principal passes with a total of 4.0 points (based on the following conversion scale: A=5, B=4, C=3, D=2, E=1) from the following subjects: Mathematics, Physics and Chemistry. Completed A-Level studies in 2014 and 2015 must possess Advanced Certificate of Secondary Education (ACSE) with Two principal passes (Two Cs) with a total of 4.0 points (based on the

following conversion scale: A=5, B+=4, B=3, C=2, D=1) from the following subjects: Mathematics, Physics and Chemistry.

3.4.2 Community Development for Water Supply and Sanitation

a) Ordinary Diploma in; Water-Related Programmes, Sociology, Anthropology, Social work, Community Development, Development Studies, Tourism, Hydrogeology & Well Drilling, Hydrology & Meteorology, Water Supply and Sanitation Engineering, Mining Engineering, Sanitation Engineering, Public Administration and any Diploma related to community Development as will be agreed by the Water Institute; or

b) Holder of Foundation Program (Science) Certificates from Open University of Tanzania for those students with GPA of less than 3.0 in above diploma programs; or

c) Advanced Certificate of Secondary Education (ACSE) with a Principal pass in any two subjects excluding religious subjects and a pass in English in Ordinary Certificate of Secondary Education (OCSE) is Compulsory.

3.4.3 Hydrogeology and Drilling

a) Holder of Ordinary Diploma in either of the following fields: Hydrogeology & Well Drilling, Hydrology & Meteorology, Water Supply and Sanitation Engineering, Mining Engineering, Sanitation Engineering, Water Resources Engineering, other Civil

or Water-related Engineering programmes with GPA (NTA6) of 3.0; or

b) Holder of Foundation Program (Science) Certificates from Open University of Tanzania for those students with GPA of less than 3.0 in above diploma programs; or

c) Holder of Full Technician Certificate (FTC) in Water Resources Engineering, Hydrogeology & Well Drilling, Hydrology & Meteorology, Civil Engineering, Sanitation Engineering, Water Quality Laboratory Technology with a minimum average score of 3.0 points (C grade) based on the following conversion scale: A=5, B=4, C=3 D=2; or

d) Holder of Advanced Certificate of Secondary Education (ACSE) with two Principal passes with a total of 4.0 points based on the following conversions scale: A=5, B=4, C=3, D=2, E=1 from the following subjects: Mathematics, Physics and Chemistry.

3.4.4 Engineering Hydrology

a) Holder of Advanced Certificate of Secondary Education (ACSE) with Two principal passes with a total of 4.0 points (based on the following conversion scale: A=5, B=4, C=3, D=2, E=1) from two of the following subjects: Mathematics, Physics and Chemistry, or

b) Holder of Ordinary Diploma in either of the following fields: Water Supply and Sanitation Engineering, Hydrogeology & Water Well Drilling, Hydrology & Meteorology, Civil

Engineering, Irrigation Engineering, Sanitation Engineering, and other fields related to Civil Engineering or Water Resources Engineering with minimum GPA (NTA 6) of 3.0; or

c) Holder of Foundation Program (Science) Certificates from Open University of Tanzania for those students with GPA of less than 3.0 in above diploma programs; or

d) Holder of Full Technician Certificate (FTC) in Water Resources Engineering, Hydrogeology and Well Drilling, Hydrology & Meteorology, Water Laboratory Technology, Civil Engineering, Sanitation Engineering, and other fields related to Civil Engineering or Water Resources Engineering with a minimum average C grade based on the following conversion scale: A=5, B=4, C=3, D=2.

3.4.5 Plumbing And Service Engineering

Diploma with GPA 3.0 or Full Technician Certificate (FTC) of at least C average in; Water supply engineering, Sanitation engineering, Hydrology and Meteorology, Hydrogeology and Water well drilling, Irrigation engineering, Land Use Planning, Agricultural Land Use Planning, Civil engineering, Operation and Maintenance of Water Systems Engineering, Water Quality and Laboratory Technology.

3.4.6 Quantity Surveying for Water and Sanitation

Ordinary diploma or Full Technician Certificate (FTC) in; Quantity surveying, Water supply and Sanitation engineering, Hydrology and Meteorology, Hydrogeology and Water well drilling, Irrigation

engineering, Civil engineering, Water Quality Laboratory Technology, Mechanical engineering, Electrical engineering, Metrology and other related field.

3.4.7 Water Quality and Laboratory Technology

Ordinary Diploma (NTA Level 6) with minimum GPA of 3.0 or FTC with average of C pass mark: Water Quality and Laboratory Technology, General laboratory technology, Environment Health Science or Water Resources Engineering.

3.4.8 Water Supply Engineering

Diploma with GPA 3.0 or Full Technician Certificate (FTC) of at least C average in; Water supply engineering, Sanitation engineering, Hydrology and Meteorology, Hydrogeology and Water well drilling, Irrigation engineering, Land Use Planning, Agricultural Land Use Planning, Civil engineering, Operation and Maintenance of Water Systems Engineering

3.5 Bachelor's Degree

The minimum admission qualification for entry to Bachelor's Degree studies is possession of Higher Diploma in Water Resources and Irrigation Engineering. There is no indirect entry route.

3.6 Masters' Degree

The Admission to the programme will be open to candidates who have bachelor degree qualifications or equivalent, who fulfil one of the following requirements:

3.6.1.1 Master of Engineering in Water Resources and Utility Management.

a) At least a Lower Second-Class degree (GPA of 2.7) or its equivalent from a recognized higher learning institution OR

b) Holders of Bachelor degree in relevant field or Equivalent with PASS from a recognized higher learning institution and with three years working experience. OR

c) Holders of Advanced Diploma in relevant field or Equivalent, with a PASS from a recognized higher learning institution and with a minimum of three years working experience.

3.6.1.2 Master of Water Supply and Sanitation Engineering

a) Civil Engineering, Water supply and Irrigation Engineering, Sanitation Engineering, Environment Engineering, Chemical Engineering or Equivalent with a GPA of at least 2.7 from a recognized higher learning institution. OR

b) Holders of Bachelor degree in related to Civil Engineering, Water and irrigation Engineering, Sanitation Engineering, Environment Engineering, Chemical Engineering or Equivalent with PASS from a recognized higher learning institution and with three years working experience. OR

c) Holders of Advanced Diploma in related to Civil Engineering, Water and irrigation Engineering, Sanitation Engineering, Environment Engineering and Chemical Engineering, or

Science with a PASS from a recognized higher learning institution and with a minimum of three years working experience.

3.6.1.3 Master of Sanitation Management

a) Bachelor degree in relevant field or Equivalent with PASS from a recognized higher learning institution and with three years working experience; or

b) Advanced Diploma in relevant field or Equivalent, with a PASS from a recognized higher learning institution and with a minimum of three years working experience; or

c) At least a Lower Second-Class degree (GPA of 2.7) or its equivalent from a recognized institution of higher learning.

3.6.1.4 Master of Water Quality and Laboratory Management

a) Bachelor degree in the fields of Chemistry, Biology, Environmental Science/Engineering, Laboratory Management, Water quality or Sciences with a GPA of at least 2.7 from a recognized higher learning institution; or

b) Bachelor degree in the fields of Engineering or Sciences with PASS from a recognized higher learning institution and with three years working experience; or

c) Advanced Diploma in the fields of Engineering or Sciences, with a PASS from a recognized higher learning institution and with a minimum of three years working experience.

3.7 Registration

All selected candidates are required to register after they have paid registration fee within the first two weeks after the date of reporting. The deadline for registration of first year students is two weeks from the first day of the orientation week, while for continuing students, deadline is the second week after the beginning of the studies.

3.8 Institutes' Rules

a) Upon admission, all first year students must obtain and read thoroughly the following regulations:

i) Students' By-Laws;
ii) Students' Academic Assessment Regulations;
iii) The Constitution of the Water Institute Students Organization (WISO);
iv) Industrial Practical Training (IPT) Regulations;
v) Library Regulations;
vi) Examination Regulations
vii) Project Guidelines (NTA Levels 6 & 8)
viii) Dissertation Guidelines (NTA Level 9)
ix) Any other rules issued by the Institute from time to time.

b) During registration every student shall produce the following documents:

i) Joining Instructions sent to the student;

ii) A duly filled acceptance form to abide by the Institute Rules and Regulations;

iii) A duly filled medical examination form;

iv) All the original receipts /pay in slips of the money paid to the Institute through Bank or the message evidencing payment via Control Number given to a student;

v) Original academic certificates, academic transcripts and statement of results;

vi) Birth certificate;

vii) Two (2) passport size and four (4) stamp size photographs recently taken;

viii) All foreign students are required to apply for residence permit from their nearest Tanzania Embassy before they depart for Tanzania.

c) Every student shall report to the Institute at the beginning of the semester and on a prescribed date by the Institute. Any student who fails to report at the Institute on the prescribed date but reports not later than seven days from the date of reporting and without showing any reasonable cause for the failure to do so, shall be liable to receive a written warning from the Registrar.

d) Students who have been selected but cannot register at the Institute for any reason cannot defer the admission to the next academic year. Such students need to apply afresh.

e) Students who have postponed studies will be required to report at the Institute at the corresponding time/date and semester similar to that one she left.

f) No change of names by students shall be entertained during the course of study at the Institute. Names appearing on the original Ordinary Certificate of Secondary Education (Form Four) shall be used.

g) No student is allowed to change course, except in very exceptional circumstances. In the latter case, no student is allowed to change course later than the second week after the beginning of the first semester session.

h) No student is allowed to postpone studies after commencement of an academic year except under special circumstances. Permission to postpone studies is considered after producing satisfactory evidence for the reasons of postponement and written approval from the sponsor.

i) Students shall be allowed to be away from studies for a maximum of two academic years if they are to be allowed for re-admission to the same year of studies where they left.

j) Students discontinued from studies on academic grounds may be re-admitted to a different programme in the immediate next academic year or in the same programme.

k) Students discontinued from studies on disciplinary grounds are barred from re-admission to any programme at the Institute unless a student finishes to save the penalty.

CHAPTER FOUR

4.0 FEE AND OTHER FINANCIAL REQUIREMENTS

4.1 General Payment Information

Fee and other financial requirements to be met by Tanzanian students in Government-owned education/training Institutions are lower than those charged by privately-owned Institutions. This is because the Government of Tanzania subsidizes operations of its Institutions (WI included) to reduce the financial responsibility of Tanzanian students.

The payments are indicated in Tanzanian shillings. Foreign students/course participants will be required to pay directly to WI in currency that is readily convertible in the Tanzanian financial market.

For each Academic Year, students are required to pay full tuition fee and other payments as per the type of programme he/she undertakes as indicated in Table 1 and Table 2 before they can be allowed to attend classes. However, where payment by installment is adopted, students shall pay sixty percent (60%) of the payment for the 1st semester in order to qualify for registration and for the 2nd semester students shall pay forty percent (40%) of the payment to qualify for registration. The payment (Except Masters Students) will be by installment of 30% twice in the first semester and 20% twice in the

second semester. No student shall be registered for the final examinations at the end of the semester or awarded a certificate unless he/she has fully paid the relevant dues.

Tanzanian students shall pay in Tanzanian Shillings and the payment for foreign students shall be denominated in either US Dollar, Euro or Pound.

All students are required to produce verifiable evidence of sponsorship from their respective organizations, parents/guardians on the first day of each academic year. Sponsors are required to pay full tuition fee and other fees to the Institute before the respective students are registered to embark on studies.

Students are directed to use the Institute Student Information Management System (SIMS) to create a control number. Use https://sims. waterinstitute.ac.tz to access the account and obtain control number that can be used to make various payments to the Institute.

Under no circumstances a direct deposit to any Institute Bank Account shall be made without control number. Receipts will be issued at the Institute Accounts office once a student has proved to clear the invoice by either original bank online deposit slip or message of payment from MNOs (Mobile Network Operators).

Foreign students must complete immigration formalities including obtaining student visa before leaving their countries to Tanzania. Apart

from Tuition Fee, each student is required to pay for the following:

4.1.2 Caution Money

The Caution money saves as the collacteral security that shall be used to recover lost or damaged Institute property and it is non-refundable amount (As shown on Table 1 to 3).

4.1.3 Identity Card

Each student shall be required to have an Identity Card annually which will be provided upon registration. Replacement for a lost Identity Card shall be done after obtaining a loss report from Police Station and payment of **TZS. 30,000/= for Tanzanian citizen or USD 25 for non-Tanzanian students.**

4.1.4 Membership to the WI Students' Organization

Every student is a member of the WI Students Organization (WISO). The membership registration fee for the first-year students is **TZS. 5,000/=.** Membership subscription fee for every continuing student is **TZS. 15,000/=** each academic year and for masters it will be **TZS. 20,000/=** as the membership registration together with membership subscription fee each academic year.

4.1.5 Students National Health Insurance

Every student shall be required to pay a total of **TZS 50,400/=** as a contribution for joining National Health Insurance Fund (NHIF). This amount is paid directly to the NHIF Account. Students with

health insurance cards are not required to pay **TZS. 50,400/=** but shall have to produce evidence that they are covered with medical insurance.

4.1.6 Accommodation in the Hostels

Ordinary Diploma (NTA Level 4-6) Students who want to be accommodated in WI hostels will pay **TZS. 300,000/=** per academic year. Foreign students who desire to be accommodated in Institute hostels will pay **USD 400** per academic year. However, accommodation is subject to availability of rooms.

4.2 Specific Information on Students Sponsorship

Students pursuing Ordinary Diploma (NTA level 4-6) programmes join the Institute as privately sponsored candidates. Whereas students pursuing Bachelor or Master of Engineering Degree are encouraged to apply for scholarship, loan from Higher Education Students Loan Board (HESLB) or third party. The fee structure for students is as shown in Table 1, 2 and 3.

Table 1: Fees/costs paid directly to WI by Sponsors of students pursuing Ordinary Diploma

S/N	Description	Tanzanian/EAC/SADC Students (TZS)			Foreign Student (USD)	
		FIRST SEMESTER				
		1st Year	2nd Year	3rd Year	1st Year	2nd & 3rd year
1	Registration Fee	10,000	-	-	15	-
2	Tuition Fee	600,000	600,000	600,000	1,235	1,235
3	NACTVET Fees	15,000	15,000	15,000	15	15
4	Medical Capitation (non-refundable)	10,000	10,000	10,000	20	20
5	Library Membership Fee	10,000	10,000	10,000	10	10
6	Examination fee	25,000	25,000	25,000	120	120
7	Caution money	40,000	-	-	30	-
8	Student's identity Card	15,000	-	-	10	-
9	Prospectus	5,000	-	-	10	
	Sub-Total	**730,000**	**660,000**	**660,000**	**1,465**	**1,400**
SECOND SEMESTER						
10	Tuition Fee	400,000	400,000	400,000	-	-
11	Medical Capitation (Non- Refundable)	10,000	10,000	10,000	-	-
12	Certification	50,000	-	-	100	-
13	Examination Fee	25,000	25,000	25,000	-	-
	Sub-Total	**485,000**	**435,000**	**435,000**	**-**	**-**
	Grand-Total	**1,215,000**	**1,095,000**	**1,095,000**	**1,565**	**1,400**

Table 2: Fees/costs paid directly to WI by Sponsors of students pursuing Bachelor Degree

S/N	Description	Tanzanian/EAC/SADC Students (TZS)		Foreign Student (USD)	
		FIRST SEMESTER			
		1st Year	2nd & 3rd Year	1st Year	2nd, 3rd Year
1	Registration Fee	20,000	-	25	-
2	Tuition Fee	810,000	810,000	1,570	1,570
3	Quality Assurance Fee	20,000	20,000	20	20
4	Medical Capitation (non-refundable)	10,000	10,000	20	20
5	Library Membership Fee	10,000	10,000	10	10
6	Examination fee	60,000	60,000	120	120
7	Caution Money	40,000	-	40	-
8	Student's Identity Card	15,000	-	10	-
9	Prospectus	5,000	-	10	-
10	Sports and Games	15,000	15,000	10	10
	Sub-Total	**1,005,000**	**925,000**	**1,835**	**1,750**
SECOND SEMESTER					
10	Tuition Fee	540,000	540,000	0	-
11	Medical Capitation (Non- Refundable)	10,000	10,000	0	-
12	Certification	50,000	0	100	-
13	Examination Fee	60,000	60,000	0	-
	Sub-Total	**660,000**	**610,000**	**100**	**-**
	Grand-Total	**1,665,000**	**1,535,000**	**1,935**	**1,750**

Table 3: Fees/costs paid directly to WI by Sponsors of students pursuing Master's Degree

S/N	Description	Tanzanian/EAC/SADC Students (TZS)		Foreign Student (USD)	
		FIRST SEMESTER			
		1st Year	2nd Year	1st Year	2nd Year
1	Registration Fee	30,000	-	15	-
2	Tuition Fee	1,500,000	1,500,000	1,500	750
3	Quality Assurance Fee	20,000	20,000	10	10
4	Medical Capitation (non-refundable)	-	-	-	-
5	Library Membership Fee	30,000	-	15	-
6	Examination fee	100,000	-	100	-
7	Caution Money	50,000	-	25	-
8	Student's Identity Card	15,000	15,000	10	10
9	Certification	-	-	100	-
	Sub-Total	**1,745,000**	**1,535,000**	**1,775**	**770**
10	Tuition Fee	1,500,000	-	-	-
11	Medical Capitation (Non- Refundable)	0	-	-	-
12	Certification	100,000	-	-	-
13	Examination Fee	100,000	-	-	-
	Sub-Total	**1,700,000**	**-**	**-**	**-**
	Grand-Total	**3,445,000**	**-**	**-**	**-**

Note: It is important to note the following:

1. Tuition fee and Caution money once paid shall not be refunded. However the tuition fee that is paid can be used to clear that particular student's payments but cannot be refunded or transferred to someone else's name/account.

2. Students benefiting from HESLB facility shall be required to pay the amount of fee which is not covered by the HESLB.

3. Tuition fee and Caution money once paid shall not be refunded. However the tuition fee that is paid can be used to clear that particular student's payments but cannot be refunded or transferred to someone else's name/account.

4. It is the responsibility of the student to ensure that fees and other costs are paid timely.

4.3 Calculation of Tuition/Examination Fee for the Student Who has Retake.

Retake/Carry is a remark for a student who fail to attain the minimum required CA for particular module(s) or fail supplementary examination but has a cumulative annual GPA >=2.0. The student is required to attend the lecture of the particular module(s) in order to attain the required competence by earning at least the minimum required CA to allow him/her to sit for the end of semester examination.

The calculation of retake/carry tuition fee of such student will be under the following formula:

$$R.T = \left(\frac{C.M}{120} \times T.F\right) + S.E.F$$

Where: ***R.T*** *is Retake/Carry Tuition Fee*

C.M *is Credit of a Module*

T.F *is Tuition Fee per year*

***S.E.F** is Semester Examination Fee*

Table 4: Recommended Costs paid Directly to Sponsored Ordinary Diploma Students by the Government and or Sponsors/parents/guardians

S/N	Description	Tanzanian/EAC/SADC Students (TZS)	Foreign Student (USD)
1	Industrial Practical Training (IPT) per year	1,000,000	1,000
2	Book/stationary costs -per year	350,000	350
3	Research/Project for NTA Level 6	300,000	300
4	Shared accommodation at the Institute -per year	300,000	300
5	Accommodation outside the Institute -per month	100,000	200-350
6	Student Residence Permit -per year	0	200
7	Stipend per year	2,400,000	1,200

Table 5: Recommended Costs Paid Directly to Sponsored Bachelor Degree Students by the Sponsors/parents/guardians

S/N	Description	Tanzanian/EAC/SADC Students (TZS)	Foreign Student (USD)
1	Industrial Practical Training (IPT)* -per year	1,000,000	1,000
2	Research/Project per year	500,000	450
3	Book/stationary costs -per year	350,000	350
4	Shared accommodation at the Institute per year	300,000	300
5	Accommodation outside the Institute-per month	100,000	200-350
6	Stipend per year	2,400,000	1,200
7	Special Faculty Requirement -per year	210,000	300
8	Student Residence Permit -per year	0	200

Table 6: Recommended Costs Paid Directly to Sponsored Master's Degree Students by the Sponsors/parents/guardians

S/N	Description	Tanzanian/EAC/SADC Students (TZS)	Foreign Student (USD)
1.	Stipend for 18 months	7,137,000	5,490
2.	Thesis/Dissertation Production	400,000	200
3.	Shared accommodation at the Institute per year	400,0000	300
4.	Books	500,000	250
5.	Stationary	1,000,000	500
6.	Health Insurance Cover	200,000	200
7.	Research Fund	5,000,000	2,500

Table 7: Other Costs for All Students

S/N	Description	Tanzanian/EAC/SADC Students (TZS)	Foreign Student (USD)
1.	Graduation Gown Hiring	50,000	50
2.	Extra Copy Transcript	30,000	30
3.	Replacement of Lost Certificate	100,000	100
4.	Provisional Results	10,000	10
5.	Extension Fee per Month	1,000,000	500
6.	Health Insurance Cover	100,000	100

Special Faculty/Course Requirements for Bachelor Degree (BD) (NTA 7- 8) and Masters Degree (NTA 9) Programmes

Faculty/Course requirements enable students to realize curriculum and participate effectively in both theoretical and practical studies in accordance with requirements of the curriculum. Cost for this item varies from one course to another depending on the respective curriculum requirements.

4.4 Final Project/Research Requirement

Diploma and bachelor degree students are required to undertake project works in their final year. Masters degree students are required to undertake research activities following successfully completion and passing course work for all modules and produce dissertation.

CHAPTER FIVE

5.0 BOARDS AND COMMITTEES

5.1 Ministerial Advisory Board

The Ministerial Advisory Board (MAB) is appointed by the Minister.

The MAB shall give advice to the Minister on;

a) The development and maintenance of a policy framework;

b) The acceptability of the Rector's Strategic and business plans and associated budgets;

c) Setting of priorities and annual performance targets for the Institute;

d) The evaluation of WI's performance;

e) The Institute's annual reports and accounts;

f) Salaries, wages and allowances of the employees of the Institute; and

g) Any other matters provided for under the Executive Agencies Act (Cap. 245).

5.2 Management Team

This Team is composed of the following members.

1. Rector
2. Deputy Rector – PFA
3. Deputy Rector – ARC
4. Head of Legal Services Unit
5. Head of Procurement Management Unit

6. Head of Internal Audit Unit
7. Head of Cmmunication and Marketing Unit
8. Head of Quality Assurance and Quality Control Unit
9. Head of Information Communicaton and Technology Unit

This Team shall have the following responsibilities:

a) Establish standards, systems and procedures for resource management and utilization;
b) Capacity building, coordination of the Institute's training programme, consultancy and research services;
c) Monitoring and evaluating the performance of operation;
d) Receive, discuss and approve reports from Units and Directorates;
e) Approve plans, budgets and other important matters of the Institute.

5.3 Academic Affairs Commitees (AAC)

a) The responsibilities of this Committee shall be to verify accuracy of examination results, student enrollment and admission reports; curriculum development.

b) The AAC shall compose of the following members:

1.	Deputy Rector – ARC	Chairperson
2.	Director Academic Support Services	Secretary
3.	Director Academics	Member
4.	Manager Research Consultancy & Publication Unit	Member
5.	Dean of Students	Member
6.	Examination Officer	Member
7.	Admission Officer	Member

8. Head of Academic Departments Member
9. Curriculum Development Coordinator Member
10. Head of Quality Assurance and Quality Control Member
11. Minister for Academic Affairs-WISO Member

5.4 Examination Irregularities Committee (EIC)

a) This Committee shall be composed of the following:
   i. Deputy Rector -ARC as the Chairperson
   ii. Legal Officer– Secretary
   iii. Director Academic Support Services – Member
   iv. Other two academic members of a senior cadre to be appointed by the Rector.

b) This Committee shall have the following responsibilities:
   i. The EIC shall receive examination irregularities cases, delibarate and recommends the action to be taken to the IAB on its findings;
   ii. The Committee shall suspend a student from studies for a period of not more than three months pending the approval by IAB.

5.5 Institutes' Academic Board (IAB)

a) There shall be established in the Institute the Institutes' Academic Board (IAB) whose authority shall be to deal with all academic matters such as students' admissions, curriculum development, quality assurance reports, review of provisional examination results and award, examination irregularities and disciplinary reports.

b) The IAB shall compose of the following members:

1.	Rector	Chairperson
2.	Deputy Rector – PFA	Member
3.	Deputy Rector – ARC	Member
4.	Head of Legal Services Unit	Member
5.	Head of Procurement Management Unit	Member
6.	Head of Internal Audit Unit	Member
7.	Head of Cmmunication and Marketing Unit	Member
8.	Head of Quality Assurance and Quality Control Unit	Member
9.	Head of Information Communicaton and Technology Unit	Member
10.	Directors	Member
11.	President-WISO	Member
12.	Singida Campus Manager	Member

CHAPTER SIX

6.0 LIBRARY SERVICE REGULATIONS

6.1 Introduction

This chapter provides a brief introduction about the library. It creates awareness to library users on how well they can utilize library resources. The chapter covers library opening and closing hours, library collection, membership and registration, library services as well as the rules and regulations. students and staff are encouraged to use WI library during their stay at Institute.

6.2 Opening and Closing Hours

Monday-Friday	8:30 a.m. - 8: 00 p.m.
Saturday	9:00 a.m. - 13:30 p.m.

On Public Holidays the library is closed. Any change in this regard will be determined by Library Committee and will be posted on notice boards and in the WI website.

6.3 Library Collection

WI library contains books and non-book materials. Moreover, new books are added on regular basis. The collection is divided into three parts which are: - general collection, special collection and reference collection. Books from general collection are allowed to be borrowed

and used outside the library while the reference and special collection are to be borrowed and used inside the library.

6.4 Membership and Registration

6.4.1 Registration to Internal Users

The entitled users of WI Library are the Institute's Society which Comprises of students, teaching staff, non- teaching employees Membership registration is done to students after being admitted as WI students while registration to staff is done whenever the new employee joins WI community.

6.4.2 External Users

WI is higher learning Institution therefore Scholars, Researchers, Scientists, Consultants, Professionals and other visitors who seek information or reference are welcomed to visit the Library. However, all external users and visitors mentioned above shall get access to the library resources upon the permission of the Deputy Rector Academics, Research and Consultancy.

6.5 Library Services

WI library offer a number of services to library users which make it to be a very conducive place for studying.

6.5.1 Internet Services

The library has a Computer Lab fully connected with internet allowing library users to access online materials. Moreover, students are allowed to come with their laptops and get access to internet services

6.5.2 Access to Online Databases

WI Library facilitates access to online databases which contains through Research4Life programs which is collective name for 4 databases of AGORA, HINARI, OARE and ARDI which provides free or low-cost access to academic and professional peer-reviewed content online to developing countries the databases contain journals and books relevant to the programs provided at the Institute

6.6 Circulation Services/ Borrowing and Returns

The circulation process involves the activities of borrowing and returning of library materials. During the registration students will be issued 3 borrowing tickets which will allow them to borrow 3books at a time and allowed to stay with them for not more than 7 days.

6.6.1 Borrowing /lending Rules and Regulations

a) Lending service /borrowing of library materials for home use/ outside of the Institute library, is the right accorded to registered library users only;

b) Only the registered library users/members can borrow one to four (1-4) books for home use for not more than 7 days. During the vacations no books are borrowed;

c) Library materials shall not be removed from the library until they have been officially issued to the borrower at the issue desk;

d) Renewal for further borrowing will be granted where the said item has not been reserved for other readers;

e) Subject to approval of the library committee, the librarian shall reserve the right to prohibit or restrict the borrowing of specified library materials;

f) Re-shelving of library materials taken from the shelves by readers shall be the responsibility of the library staff;

g) The borrower in whose name library material is issued shall be responsible for returning it;

h) Failure to return library materials by the due date shall attract a fine of Tsh 1000/= per each item, per each day;

i) If the item remains unreturned six days after the due date, a final reminder notice will be issued to the borrower;

j) Library materials that remain unreturned a week after the reminder notice, will be assumed to have been lost and the borrowed person shall be required to pay the lost item immediately;

k) Materials may be reserved for borrowing provided they will be returned to the shelves if not claimed within three days;

l) The finalists who have not returned borrowed materials nor paid fines shall never be required to be given their statement of results or transcripts;

m) Fine for overdue Special Reserve items however is 500 shillings per hour. Any staff member who refuses to pay the fines or replacement costs of lost books will be liable to have these costs recovered from his salary through the account Department office;

n) The number of items which a student may have on loan at one time shall not exceed three volumes while the number of volume academic staff member may have on loan from the library at one time shall not exceed six volumes.

6.6.2 Overdue Book loans

a) Books and other information resources are the property of the Institute library. Users who borrow library materials should return on or before due date. A penalty of **TZS. One Thousand (1,000/=)** will be charged for each overdue day;

b) Library staff will keep on writing overdue reminder notices to inform any user whose book(s) is /are overdue;

c) Resistant users with overdue book loans will be reported to higher authority for further steps. A student can be restricted to access his or her examination results or any academic output he deserves if he further resists returning a book;

d) Library clearance form has been designed to be completed by every student before acquiring his/her certificate or statement

of results. Additionally, retirement benefits will be withheld for employee who holds any library item or fine until all the debts are recovered.

6.7 Misplaced, lost and damaged items

a) Library user are required to handle the borrowed library materials with care. Any lost or damaged materials shall be charged twice of the original price for replacement/ based on the current market price;

b) Users found defacing library materials, for instance mutilating books and other library items will be prosecuted followed by terminating library membership;

c) Users are not allowed to return books or other library items back the shelves; to avoid misplacement of books from their proper locations all books must be left on the reading tables and it is the duty of the library staff to shelve all used books;

d) Replacement of borrowing tickets will be charged Tshs. 1000/= per ticket and all borrowing tickets are required to retuned after the end of the study year.

6.8 Order and Discipline

a) All students must show their valid identity cards at the entrance;

b) Observe silence, switch off your mobile phones or operate them in silence modes;

c) Food and any kind of a drink are prohibited in the library;

d) Do not leave your belongings in the library special deposit when attending lectures or other activities outside;

e) Smoking and the use of matches or open light in any part of the library is strictly prohibited;

f) No dispatch case/wallet of over 8" by 5'' in size, corts, bags, parcels or attached case is allowed into the library. All these things must be deposited at the counter (check point) in return for a control card, which must be presented to retrieve the deposited materials on leaving the library;

g) Readers must dress and behave in a manner that will not cause offence, damage or inconvenience to other users; dress code should be adhered;

h) The assistant at the control counter in the entrance lobby will insist that a reader show all his books on leaving the library as precaution against the illegal removal of books. Borrowers are asked to give the assistant their full cooperation in this matter. This area should be mproved.

CHAPTER SEVEN

7.0 ACADEMIC PROGRAMMES AND STAFF PROFILES

7.1 ACADEMIC PROGRAMMES

The institute offers Ordinary Diploma (OD) Bachelor, Degree (BD) and Master Degree. Students admitted for OD may exit at NTA level 4 and 5 with the award of Basic Technician Certificate (BTC) and Technician Certificate (TC) respectively. Successful students who complete Ordinary Diploma course are awarded an Ordinary Diploma at NTA level 6. While those for engineering degree courses may exit at NTA level 7 and are awarded a Higher Diploma (HD), including those who proceed to NTA level 8 will be awarded Bachelor degree.

7.1.1 Department of Water Supply and Sanitation Engineering

This Department offers Ordinary Diploma (NTA Level 4 – 6) in Water Supply Engineering, Irrigation Engineering, Sanitation Engineering, Operation and Maintenance of Water Systems Engineering, Quantity Surveying for Water and Sanitation, Pump Mechanics Engineeering, Plumbing Engineering, Geomatics for Water and Civil Work Management, Community Deveopment for Water and Sanitation; Bachelor Degree (NTA Level 7 – 8) in Water Resources and Irrigation Engineering, Sanitation Engineering, Community Development for Water Supply and Sanitation, Plumbing And Service Engineering, Quantity Surveying for Water and Sanitation, Water Supply

ngineering and Master Degree (NTA Level 9) in Water Supply and Sanitation Engineering and in Sanitation Management.

7.1.1.1 Basic Technician Certificate (BTC) in Water Supply Engineering– NTA Level 4

SEMESTER 1: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT04101	Algebra	2	1	0	1	6
GDT04102	Basic Computer Application	2	0	2	2	9
WST04101	Technical Drawing	2	1	2	1	9
WST04102	Construction Materials	2	2	2	2	12
WST04103	Plumbing	2	1	4	1	12
WST04104	Electrical and Welding Workshop	2	0	1	1	6
HMT04101	Basics of Hydrology and Meteorology	2	0	1	1	6
Total		**14**	**5**	**12**	**9**	**60**

SEMESTER 2: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT04203	Communication Skills & Technical report writing	2	1	0	1	6
GDT04204	Statistics and Probability	2	1	0	1	6
GDT04206	Entrepreneurship	2	1	0	1	6
WST04205	Soil and Water Sampling Techniques	2	0	1	1	6
WST04206	Civil Engineering Drawing	2	1	2	1	9
WST04207	Basics of Construction of Water supply and Sanitation structures	2	1	2	1	9
WST04208	Water Pumps Technology	2	1	2	1	9
WST04209	Basic Surveying	2	1	2	1	9
	Total	**16**	**7**	**9**	**8**	**60**

L = lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 4: 120

7.1.1.2 Technician Certificate (TC) in Water Supply and Sanitation Engineering – NTA Level 5

SEMESTER 1: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT05101	Calculus	2	1	0	1	6
GDT05102	Supervisory Techniques and Ethics	2	1	0	1	6
WST05101	Topographic Surveying	2	1	4	1	12
WST05102	Construction of Water Supply and Sanitation Structures	2	0	2	1	8
WST05103	Civil Engineering CAD Applications	2	1	2	1	9
WST05104	Quantity Surveying	2	1	2	1	9
WST05105	Engineering Mechanics	2	0	2	1	8
IPT05101	Industrial Practical Training	0	0	0	7	10
Total		**14**	**5**	**12**	**14**	**68**

L = lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT05204	Coordinate Geometry	2	1	0	1	6
GDT05205	Computer Office Applications	2	1	2	1	9
WST05206	Soil Mechanics	2	0	3	1	9
WST05207	Pipe laying	2	0	2	1	8
WST05208	Operation and Maintenance of Water Supply Systems	2	1	2	1	9
SET05209	Operation and Maintenance of Sanitation Systems	2	0	2	1	6
WST05210	Basics of Procurement Practice	2	0	0	1	4
Total		**14**	**2**	**11**	**7**	**53**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 5: 120 Minimum credits required at level 5: 120

7.1.1.3 Ordinary Diploma in Water Supply and Sanitation Engineering – NTA Level 6

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GST06101	Coordinate Geometry	2	1	0	1	4	6
GST06102	Supervisory Techniques	2	1	0	1	4	6
GST06103	Computer Networks	2	0	1	0	3	6
	Sub Total hrs/wk	**6**	**2**	**1**	**2**	**11**	**16**
	CORE MODULES						
WST06101	O&M of Water and Wastewater Treatment Plant	2	0	2	2	6	9
WST06102	GIS and Remote Sensing	2	0	2	1	5	8
WST06103	Hydraulics	2	1	2	1	6	9
WST06104	Structural Design	2	2	0	2	6	9
WST06105	Rainwater Harvesting	2	1	0	1	4	6
WST06106	Water Retaining Structures	2	2	0	2	6	9
	Sub Total hrs/wk	**12**	**6**	**6**	**9**	**30**	**50**
	Total Contact hrs/wk	**18**	**8**	**7**	**11**	**41**	**66**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GST06204	Statistics and Probability	2	1	0	1	4	6
	Sub Total hrs/wk	**2**	**1**	**0**	**1**	**4**	**6**
	CORE MODULES						
WST06207	Control Surveying and Setting Out	2	1	2	1	6	9
WST06208	Sanitation Engineering	2	0	2	1	5	8
WST06209	Soil Mechanics	2	0	2	2	6	9
WST06210	Non-Revenue Water Management	2	0	0	2	4	6
WST06211	Commercial and Customer Orientation	2	0	0	2	4	6
WST06212	Design of Water Supply systems	2	0	2	2	6	9
HMT06205	Integrated Water Resources Management	2	0	0	2	4	6
HMT06206	Climate change and variability	2	1	0	0	3	4
PRJ06201	Project Work	0	0	7	0	7	10
	Sub Total hrs/wk	**16**	**2**	**15**	**12**	**46**	**67**
	Total Contact hrs/wk	**18**	**3**	**15**	**13**	**49**	**73**

L=lectures P=practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 6: 139 Minimum credits required at level 6:120

7.1.1.4 *Basic Technician Certificate (BTC) in Irrigation Engineering – NTA Level 4*

SEMESTER 1: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT04101	Algebra	2	1	0	1	6
GDT04102	Basic Computer Application	2	1	2	1	9
WST04101	Technical Drawing	2	1	2	1	9
WST04103	Plumbing	2	1	4	1	12
IET04102	Construction Materials and equipment of Irrigation structures	2	0	2	1	8
IET04103	Operation and Maintenance of irrigation systems	2	1	2	1	8
IET04104	Principles of Agronomy	2	1	2	1	9
HMT04101	Basics of Hydrology and Meteorology	2	0	1	1	6
Total		**16**	**5**	**13**	**8**	**67**

SEMESTER 2: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT04203	Communication Skills & Technical report writing	2	1	0	1	6
GDT04204	Statistics and Probability	2	1	0	1	6
GDT04206	Entrepreneurship	2	1	0	1	6
WST04206	Civil Engineering Drawing	2	1	2	1	9
IET04205	Basics of Agribusiness	2	0	1	1	6
IET04206	Soil-Plant -Water relationship	2	0	2	0	6
IET04207	Soil and Water Sampling	2	0	2	0	6
IET04208	Water Pumps Mechanic and Operation	2	0	2	1	7
WST04209	Basic Surveying	2	1	2	1	9
Total		**18**	**5**	**11**	**7**	**61**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 4: 123

7.1.1.5 Technician Certificate (TC) in Irrigation Engineering – NTA Level 5

SEMESTER 1: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT05101	Calculus	2	1	0	1	6
GDT05102	Supervisory Techniques and Ethics	2	1	0	1	6
IET05101	Processing of Agro-meteorological and Agronomical data	2	1	2	1	9
IET05102	Soil and Water Analysis	2	1	2	1	9
WST05101	Topographic Surveying	2	1	4	1	12
WST05103	Civil Engineering CAD Applications	2	1	2	1	9
WST05104	Quantity Surveying	2	1	2	1	9
IPT05101	Industrial Practical Training	0	0	7	0	10
Total		**14**	**7**	**19**	**7**	**70**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT05204	Coordinate Geometry	2	1	0	1	6
GDT05205	Computer Office Applications	2	1	2	1	9
IET05203	Land Levelling and Grading	2	1	3	0	9
IET05204	Construction of Simple Irrigation Systems	2	1	3	1	10
IET05205	Agricultural Technology Dissemination	3	1	2	0	9
IET05206	Farm Records and Record Keeping	2	0	1	1	6
WST05206	Soil Mechanics	2	0	3	1	9
Total		**15**	**5**	**14**	**4**	**58**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 5: 124 Minimum credits required at level 5: 120

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
FUNDAMENTAL MODULES							
GST06101	Coordinate Geometry	2	2	0	2	6	9
GST06102	Supervisory Techniques	2	1	0	1	4	6
GST06103	Computer Networks	2	0	1	1	4	6
	Sub Total hrs/wk	**6**	**3**	**1**	**4**	**14**	**21**
	CORE MODULES						
IRT06101	Operation and Maintenance of Irrigation Systems	4	1	2	0	7	9
IRT06102	Irrigation Water Requirement	6	1	0	1	8	12
IRT06103	Land Suitability for Irrigation	4	2	2	1	9	9
WST06102	GIS and Remote Sensing	2	0	2	1	5	8
WST06103	Hydraulics	2	1	2	1	6	9
WST06106	Water Retaining Structures	2	2	0	2	6	9
	Sub Total hrs/wk	**20**	**7**	**8**	**6**	**41**	**56**
	Total Contact hrs/wk	**26**	**10**	**9**	**10**	**55**	**77**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GST06204	Statistics and Probability	2	1	0	1	4	6
	Sub Total hrs/wk	**2**	**1**	**0**	**1**	**4**	**6**
	CORE MODULES						
IRT06205	Design of Simple Irrigation Structures	4	1	2	0	7	9
IRT06206	Planning Construction of Irrigation System	4	1	2	1	8	12
WST06207	Control Surveying and Setting Out	2	1	2	1	6	9
WST06209	Soil Mechanics	2	0	2	2	6	9
HMT06205	Integrated Water Resources Management	2	0	0	2	4	6
HMT06206	Climate Change and Variability	2	1	0	1	4	6
PRJ06201	Project Work	0	0	7	0	7	10
	Sub Total hrs/wk	**16**	**4**	**15**	**7**	**42**	**61**
	Total Contact hrs/wk	**18**	**5**	**15**	**8**	**46**	**67**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 6: 149 Minimum credits required at level 6: 120

7.1.1.7 Basic Technician Certificate (BTC) in Sanitation Engineering –NTA Level 4

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
GST04101	Mathematical Functions	2	2	0	0	4	6
GST04102	Basic Chemistry	2	2	0	0	4	6
GST04103	Basic Computer Application	2	2	0	0	4	6
GST04104	Communication Skills	2	0	0	1	3	4
WST04101	Technical Drawing	2	1	2	2	6	9
SET04102	Basic Surveying	2	0	3	1	6	9
SET04103	Plumbing, Electrical and Welding Workshop	2	2	3	1	8	12
SET04104	Basics of Sanitation	2	0	2	2	6	9
	Total Contact hrs/wk	**16**	**7**	**9**	**6**	**38**	**61**

L=Lectures; P=Demonstrated performance; T=Tutorial; AS=Assignment

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
GST04205	Fundamental Algebra	2	2	0	0	4	6
GST04206	Mechanics and Fluid Dynamics	2	1	0	0	3	4
GST04207	Basics of Entrepreneurship	2	1	0	0	3	4
SET04205	Soil, Wastewater and Fecal Sludge Sampling Techniques	2	0	3	1	6	9
WST04206	Civil Engineering Drawings	2	1	2	1	6	9
SET04207	Basics of Construction of Sanitation Systems	2	0	3	1	6	9
SET04208	Fundamentals of Operation and Maintenance of Sanitation Systems	2	0	3	1	6	9
IPT04201	Industrial Practical Training	0	0	0	0	0	10
	Total Contact hrs/wk	**18**	**6**	**4**	**9**	**37**	**60**

L=Lectures; P=Demonstrated performance; T=Tutorial; AS=Assignment

Total Credits at NTA Level 6: 121 Minimum credits required at level 4: 120

7.1.1.8 Technician Certificate (TC) in Sanitation Engineering –NTA Level 5

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GST05101	Algebra	2	2	0	0	4	6
GST05102	Thermodynamics	2	2	0	0	4	6
GST05103	Microsoft Office Applications	2	2	0	0	4	6
	Sub Total hrs/wk	**6**	**6**	**0**	**0**	**12**	**18**
	CORE MODULES						
WST05101	Topographic Surveying	2	2	3	1	8	12
SET05102	Construction of Sanitation Structures	2	0	2	1	5	8
WST05103	Civil Engineering CAD Applications	2	1	2	1	6	9
WST05104	Quantity Surveying	2	1	2	1	6	9
WST05105	Engineering Mechanics	2	0	2	1	5	8
SET05106	Quantification and Characterization of Wastewater and Feacal Sludge	2	2	1	0	5	8
	Sub Total hrs/wk	**12**	**7**	**9**	**7**	**40**	**48**
	Total Contact hrs/wk	**18**	**13**	**9**	**7**	**71**	**66**

L=Lectures P=Demonstrated performance work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GST05204	Calculus	2	2	0	0	4	6
GST05205	Electromagnetism, Waves and Optics	2	0	2	0	0	6
GST05206	Technical Report Writing	2	0	0	2	4	6
GST05207	Sanitation Business Opportunities	2	0	0	2	4	6
	Sub Total hrs/wk	**8**	**2**	**2**	**4**	**12**	**24**
	CORE MODULES						
SET05207	Field and laboratory techniques in Soil, Waste water and Faecal sludge	2	0	2	2	6	9
SET05208	Installation of sanitary fittings and appliances	2	0	2	0	4	6
SET05209	Operation and Maintenance of Sanitation Systems	2	0	2	0	4	6
SET05210	Construction Management for Sanitation Project	2	0	2	0	4	6
IPT05201	Industrial Practical Training	0	0	0	0	0	10
	Sub Total hrs/wk	**8**	**0**	**8**	**2**	**18**	**37**
	Total Contact hrs/wk	**16**	**0**	**16**	**4**	**36**	**61**

L=lectures P=Demonstrated performance work T=Tutorials and AS=Assignment
Total Credits at NTA Level 5: 127 Minimum credits required at level 5: 120

7.1.1.9 Ordinary Diploma (OD) in Sanitation Engineering –NTA Level 6

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GST06101	Coordinate Geometry	2	2	0	0	4	6
GST06102	Supervisory Techniques	2	2	0	0	4	6
	Sub Total hrs/wk	**4**	**4**	**8**	**0**	**8**	**12**
	CORE MODULES						
WST06101	Design of Sanitation Systems	2	0	2	1	5	7
WST06102	GIS and Remote Sensing	2	2	3	1	8	12
SET06103	Structural Design	2	2	0	0	4	6
SET06104	Design of Wastewater Treatment Systems	2	2	2	1	7	10
SET06105	Sanitation Business Model	2	2	0	0	4	6
WST06105	Soil Mechanics and Foundations	2	0	3	1	6	9
	Sub Total hrs/wk	**12**	**8**	**9**	**3**	**32**	**48**
	Total Contact hrs/wk	**14**	**12**	**17**	**3**	**40**	**60**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GST06203	Computer Networks	2	2	0	0	4	6
GST06204_New	Statistics and Probability	2	2	0	0	4	6
	Sub Total hrs/wk	**4**	**4**	**0**	**0**	**8**	**12**
	CORE MODULES						
SET06207	Sanitation Engineering	2	2	2	0	6	9
SET06208	Sanitation Marketing and Demand	2	2	0	0	4	6
WST06206	Control Surveying and Setting Out	2	1	2	1	6	9
SET06210	Integrated Sanitation Management	2	2	2	0	6	9
SET06211	Emergency Sanitation	2	2	2	0	6	9
PRJ06201	Project Work	0	0	7	0	7	10
	Sub Total hrs/wk	**10**	**10**	**13**	**0**	**33**	**49**
	Total Contact hrs/wk	**12**	**13**	**13**	**0**	**41**	**61**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

7.1.1.10 Basic Technician Certificate in Operation and Maintenance of Water Systems Engineering –NTA Level 4

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk				Credit
		L	T	P	AS	
GST04101	Mathematical Functions	2	1	0	1	6
GST04103	Basic Computer Application	2	1	0	1	6
GST04104	Communication Skills	2	0	0	2	6
WST04101	Technical Drawing	2	1	2	1	9
SET04102	Basic Surveying	2	0	3	1	9
OMT04103	Construction Materials and Inventory Practices	2	0	2	1	8
OMT04104	Installation of Water and Wastewater Facilities	2	0	4	2	12
	Total	**14**	**3**	**11**	**9**	**56**

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
GST04205	Fundamental Algebra	2	1	0	1	4	6
GST04208	Occupational Health, Safety and Gender	2	0	0	1	3	4
OMT04205	Electrical Control Systems and Welding	1	0	2	1	4	6
WST04206	Civil Engineering Drawing	2	1	2	1	6	9
OMT04207	Operation and Maintenance of Water Pumping Systems	2	0	4	2	8	12
OMT04208	Operation and Maintenance of Water Supply Systems	2	0	4	2	8	12
OMT04209	Construction of water and Wastewater Structures	2	0	3	1	6	9
IPT04201	Industrial Practical Training (IPT)	0	0	0	0	0	10
	Total	**13**	**2**	**15**	**9**	**39**	**68**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 4: 124 Minimum credits required at level 4: 120

7.1.1.11 Technician Certificate in Operation and Maintenance of Water Systems Engineering –NTA Level 5

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GST05101	Algebra	2	1	0	1	4	6
GST05103	Microsoft Office Applications	2	2	0	0	4	6
GST05104	Technical Report Writing	2	0	0	2	4	6
	Sub Total hrs/wk	**5**	**1**	**2**	**4**	**12**	**18**
	CORE MODULES						
WST05103	Civil Engineering CAD Applications	2	1	2	1	6	9
WST05104	Quantity Surveying	2	1	2	1	6	9
OMT05102	Construction and Installation of Sanitation Systems	2	0	3	1	6	9
OMT05103	Construction and Installation of Water Systems	2	1	3	2	8	12
OMT05104	Water and Sanitation Data Collection	1	0	2	1	4	6
	Sub Total hrs/wk	**9**	**3**	**12**	**6**	**30**	**45**
	Total Contact hrs/wk	**14**	**4**	**14**	**10**	**32**	**63**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GST05204	Calculus	2	1	0	1	4	6
GST05205	Entrepreneurship	2	1	0	1	4	6
	Sub Total hrs/wk	**4**	**2**	**0**	**2**	**8**	**12**
	CORE MODULES						**-**
OMT05206	Operation and Maintenance of Wastewater Treatment Facilities	2	0	3	1	6	9
OMT05207	Operation and Maintenance of Water Treatment Facilities	2	0	3	1	6	9
WST05206	Soil Mechanics	2	0	3	1	6	9
OMT05210	Topographical Survey	2	1	4	1	8	12
IPT05201	Industrial Practical Training (IPT)	0	0	0	0	0	10
	Sub Total hrs/wk	**8**	**1**	**13**	**4**	**26**	**49**
	Total Contact hrs/wk	**12**	**2**	**13**	**6**	**34**	**61**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 5: 124 Minimum credits required at level 5: 120

7.1.1.12 Ordinary Diploma Certificate in Operation and Maintenance of Water Systems Engineering –NTA Level 6

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GST06101	Statistics and probability.	2	1	0	2	5	8
GST06102	Supervisory Techniques	2	2	0	2	6	9
	Sub Total hrs/wk	**4**	**3**	**0**	**3**	**10**	**17**
	CORE MODULES						
OMT06101	Basic Applications of Remote Sensing and GIS	2	1	4	1	8	12
OMT06102	Planning and Design of Simple Sanitation systems.	2	2	3	1	8	12
OMT06103	Planning and Design of water Supply systems.	2	2	3	1	8	12
OMT06104	Basics of Project Management.	2	1	2	1	6	9
	Sub Total hrs/wk	**8**	**6**	**12**	**4**	**30**	**45**
	Total Contact hrs/wk	**12**	**9**	**12**	**7**	**40**	**62**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	CORE MODULES						
OMT06206	Basics of Control Engineering.	2	1	3	2	8	9
OMT06207	Basics of Renewable energy	2	0	3	1	6	9
OMT06208	Operation and maintenance of Dam Structures	2	1	3	2	8	12
OMT06209	Operation and maintenance of water wells.	2	1	3	2	8	12
OMT06210	Integrated Water Resources Management	2	0	0	4	6	9
PRJ06201	Project work	0	0	0	0	0	10
	Sub Total hrs/wk	**10**	**3**	**12**	**11**	**36**	**61**
	Total Contact hrs/wk						

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 6: 123 Minimum credits required at level 4: 120

7.1.1.13 Basic Technician Certificate in Quantity Surveying for Water and Sanitation – NTA Level 4

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT04102	Basic Computer Application	2	1	0	1	6
2	QST04101	Building Construction	2	1	3	2	12
3	WST04101_New	Technical Drawing	2	1	2	1	9
4	WST04102_New	Construction Materials	2	2	2	2	12
5	WST04103_New	Plumbing	2	1	4	1	12
6	QST04102	Principles of Measurements	2	1	0	1	6
7	QST04103	Mechanics	2	1	2	1	9
		Total	**14**	**8**	**13**	**9**	**66**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
8	GDT04203	Communication & Technical report writing skills	2	1	0	1	6
9	GDT04204	Statistics and Probability	2	1	0	1	6
10	GDT04206	Entrepreneurship	2	1	0	1	6
11	QST04204	Measurements of Building works	2	1	2	1	9
12	WST04206	Civil Engineering Drawing	2	1	2	1	9
13	QST04205	Basic Accounting	2	1	0	1	6
14	QST04206	Basics of Economics	2	2	0	1	8
15	WST04209	Basic surveying	2	1	2	1	9
		Total	**16**	**9**	**6**	**8**	**59**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 4: 122 Minimum credits required at level 4: 120

7.1.1.14 Technician Certificate in Quantity Surveying for Water and Sanitation –NTA Level 5

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT05101	Calculus	2	1	0	1	6
2	WST05101	Topographic Surveying	2	1	4	1	12
3	WST05102	Construction of Water Supply and Sanitation Structures	2	1	2	0	8
4	WST05103	Civil Engineering CAD Applications	2	1	2	1	9
5	QST05101	Water and Waste Water Treatment Technologies	2	1	2	0	8
6	QST05102	Pavement Materials and Technology	2	1	2	1	9
7	QST05103	Measurements of Water supply and Sanitation structures	2	1	0	1	6
8	IPT05101	Industrial Practical Training	0	0	7	0	10
	Total		**14**	**7**	**19**	**5**	**68**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	GDT05205	Computer Office Applications	2	1	2	1	9
10	QST05204	Basics of Irrigation engineering	2	1	2	1	9
11	WST05206	Soil Mechanics	2	0	3	1	9
12	WST05207	Pipe Laying	2	0	2	1	8
13	QST05205	Measurements of Pipe Laying works	2	0	2	1	8
14	QST05206	Estimation and Price analysis	2	0	2	1	8
15	QST05207	Tender document and Procedures	2	1	2	1	9
	Total		**14**	**2**	**14**	**7**	**58**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 5: 122 Minimum credits required at level 5: 120

7.1.1.15 Ordinary Diploma Certificate in Quantity Surveying for Water and Sanitation –NTA Level 6

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT06102	Introduction to Programming Language	2	1	2	0	7
2	WST06102	GIS and Remote Sensing	2	1	2	1	9
3	QST06101	Quantity Surveying Project	1	0	5	0	9
4	QST06102	Basics of Quantity Surveying	2	1	0	0	4
5	HDT06103	Water Well Design and Construction	2	1	2	0	9
6	QST06103	Construction of Hydraulic Structures	2	1	2	0	8
7	QST06104	Measurements of Maintenance works	2	1	2	0	8
8	IPT06101	Industrial Practical Training	0	0	7	0	10
	Total		**13**	**6**	**22**	**1**	**64**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	QST06205	Construction Procurement	2	2	0	1	8
10	QST06206	Basics of Contract Management	2	1	2	1	9
11	WST06208	Construction management	2	2	0	2	9
12	QST06209	Basics of Construction Economy	2	2	0	1	8
13	QST06210	Measurements of Civil Works	2	2	2	1	10
14	QST06211	Ethics in Professional Practices	2	1	0	1	6
15	PRJ06201	Project Work	0	0	7	0	10
	Total		**12**	**10**	**11**	**7**	**60**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 5: 124 Minimum credits required at level 5: 120

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT04101	Algebra	2	1	0	1	6
2	GDT04102	Basic Computer Application	2	1	2	1	9
3	WST04101	Technical Drawing	2	1	2	1	9
4	PMT04102	Mechanical Engineering Materials	2	2	3	1	12
5	WST04103	Plumbing	2	1	4	1	12
6	PMT04104	Fundamentals of Electrical and Electronics Engineering.	2	0	2	0	6
7	PMT04105	Renewable Energy for water pumping systems	2	0	2	0	6
	Total		**14**	**6**	**15**	**5**	**60**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
8	GDT04203	Communication & Technical report writing skills	2	1	0	1	6
9	GDT04204	Statistics and Probability	2	1	0	1	6
10	GDT04206	Entrepreneurship	2	1	0	1	6
11	PMT04205	Fundamentals of machining processes	2	0	2	0	6
12	PMT04206	Detailed and assembling Drawings	2	1	2	1	9
13	PMT04207	Positive Displacement Pumps types & operation	2	1	2	1	9
14	PMT04208	Welding and Metal Fabrication	2	1	2	1	9
15	PMT04209	Pump Drives	2	1	2	1	9
	Total		**16**	**7**	**10**	**7**	**60**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 4: 120 Minimum credits required at level 4: 120

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT05101	Calculus	2	1	0	1	6
2	GDT05102	Supervisory Techniques and Ethics	2	1	0	1	6
3	PMT05101	Centrifugal pump types, operation & maintenance	2	1	4	1	10
4	PMT05102	Electrical machines and system	2	0	2	1	8
5	PMT05103	Fundamentals of Computer Aided Drafting (CAD)	2	1	2	1	9
6	PMT05104	Pumps Actuators and Control devices	2	1	2	1	9
7	PMT05105	Engineering Mechanics	2	0	2	1	8
8	IPT05101	Industrial Practical Training	0	0	7	0	10
	Total		**14**	**5**	**19**	**7**	**66**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	GDT05204	Coordinate Geometry	2	1	0	1	6
10	GDT05205	Computer Office Applications	2	1	2	1	9
11	PMT05206	Digital Electronics	2	0	3	1	9
12	PMT05207	Installation of pump	2	0	2	1	8
13	PMT05208	Fundamentals of 3d modeling (solid work)	2	1	2	1	9
14	PMT05209	Pump design and construction	2	0	2	1	8
15	PMT05210	Strength of materials	2	1	0	1	6
	Total		**14**	**3**	**11**	**7**	**54**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 5: 120 Minimum credits required at level 5: 120

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT06101	Basics of Computer Programming	2	1	2	0	7
2	PMT06101	Measurement and instrumentation	2	0	2	1	7
3	PMT06102	AC motor starting and protection system	2	2	3	1	12
4	PMT06103	Fluid Mechanics	2	2	3	1	12
5	WST06104	Operation and curves of pumps	2	1	2	1	9
6	PMT06105	Sensors and transducer devices	2	1	2	1	9
7	IPT06101	Industrial Practical Training	0	0	7	0	10
	Total		**12**	**7**	**21**	**5**	**66**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	PMT06206	Pump Hydraulic & Pneumatic Systems	2	1	2	1	9
2	PMT06207	Programmable Logic Controller	2	1	2	1	9
3	WST06208	Industrial Process control	2	1	2	1	8
4	PMT06209	Energy Conservation and Life-Cycle Costs of pump	2	1	0	1	6
5	PMT06210	Signal Conditioning and Transmission	2	1	2	1	9
6	PMT06211	Performance Improvement of pumping system	2	1	0	1	6
7	PRJ06201	Project Work	0	0	7	0	10
	Total		**12**	**6**	**15**	**6**	**57**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 6: 123 Minimum credits required at level 6: 120

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT04101	Algebra	2	1	0	1	6
2	GDT04102	Basic Computer Application	2	1	2	1	9
3	PET04101	Pipes, Fittings, Joints and Fixtures	2	0	3	1	9
4	PET04102	Construction Materials, Tools and Equipment	2	0	2	1	7
5	PET04103	Bench Work Operations	2	0	3	1	9
6	WST04101	Technical Drawing	2	0	3	1	9
7	PET04105	Plumbing Workshop Safety and Surroundings	2	1	2	0	8
8	PET04106	Basics of Pump Technology	2	0	2	1	7
	Total		**16**	**3**	**17**	**7**	**64**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	GDT04203	Communication Skills & Technical report writing	2	1	0	1	6
10	GDT04204	Statistics and Probability	2	1	0	1	6
11	GDT04206	Entrepreneurship	2	1	0	1	6
12	WST04209	Basic Surveying	2	1	2	1	9
13	PET04208	Construction of Small scale plumbing system	2	1	2	1	9
14	PET04209	Installation of Small scale plumbing system	2	1	2	1	9
15	PET04210	Operation and Maintenance schedule for plumbing system	2	0	2	1	8
16	PET04211	Electrical and Welding Workshop	2	0	2	1	7
	Total		**16**	**6**	**10**	**8**	**60**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 4: 124 Minimum credits required at level 4: 120

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT05101	Calculus	4	1	0	1	**6**
2	GDT05102	Supervisory Techniques and Ethics	2	1	0	1	**6**
3	PET05101	Topographic Surveying	2	1	3	1	**9**
4	PET05102	Operation and Maintenance of Plumbing systems	2	1	2	1	**9**
5	PET05103	Quantity Surveying for Plumbing Works	2	1	0	1	**6**
6	WST05102	Construction of Water Supply and Sanitation Structures	2	0	2	1	**8**
7	PET05105	CAD Applications in Plumbing	2	0	3	1	**9**
8	IPT05101	Industrial Practical Training	0	0	7	0	**10**
	Total		**16**	**5**	**17**	**7**	**62**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	GDT05204	Coordinate Geometry	2	1	0	1	**6**
10	GDT05205	Computer Office Applications	2	1	2	0	8
11	PET05206	Basics of Pressurized Irrigation Systems	2	0	2	0	6
12	PET05207	Engineering Mechanics for plumbing	2	1	2	1	9
13	WST05206	Soil Mechanics	2	0	3	1	9
14	PET05209	Installation of Plumbing system	2	0	3	1	8
15	PET05210	Operation and Maintenance of Water and Wastewater treatment plants	3	0	3	1	9
16	PET05211	Installation of Petroleum and Gas systems	2	0	2	1	7
	Total Credits		**17**	**4**	**17**	**5**	**62**

L=Lectures P=Practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 5: 124 Minimum credits required at level 5: 120

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT06101	Basics of Computer Programming	2	0	2	1	7
2	PET06101	Concrete Technology	3	0	3	0	9
3	PET06102	Design Principles for Oil and Gas System	2	0	2	0	6
4	PET06103	Piping Systems	2	1	2	1	8
5	WST06103	Hydraulics	2	1	2	1	9
6	WST06105	Soil Mechanics and Foundations	2	0	3	1	9
7	WST06102	GIS and Remote Sensing	2	0	2	1	8
8	IPT06101	Industrial Practical Training	0	0	7	0	10
	Total		**15**	**1**	**22**	**4**	**63**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	PET06206	Construction Technology	2	1	3	0	9
10	PET06207	Design of Plumbing System	2	0	3	0	8
11	PET06208	Insulation of Piping System	2	0	2	0	6
12	PET06209	Design of Oil and Gas System	2	1	2	0	8
13	WST06208	Construction Management	2	0	2	1	6
14	WST06206	Control Surveying and Setting Out	2	1	2	1	9
15	PET06211	Hydraulic and Pneumatic system	0	0	2	0	6
16	PRJ06201	Project Work	0	0	7	0	9
	Total Credit		**12**	**2**	**24**	**2**	**61**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 6: 124 Minimum credits required at level 6: 120

7.1.1.22 Basic Technician Certificate in Geomatics for Water and Civil Work Management –NTA Level 4

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT04101	Algebra	2	1	0	1	6
2	GDT04102	Basic Computer Application	2	0	2	2	9
3	GDT04107	Physics of Geomatics	2	2	0	2	9
4	WST04101	Technical Drawing	2	1	2	2	9
5	GWT04101	Basic Surveying	2	2	4	2	15
6	GWT04102	Water Supply and Sanitation Systems	2	2	0	2	12
		Total	**12**	**7**	**8**	**11**	**60**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT04203	Communication skills	2	1	0	1	6
2	GDT04204	Statistics and Probability	2	1	0	1	6
3	GDT04206	Entrepreneurship	2	1	0	1	6
4	GWT04203	Traverse Surveying	2	2	4	2	15
5	GWT04204	Principles of Cartography	2	2	4	2	15
6	GWT04205	Basic Surveying Computations	4	2	0	2	12
	Total		**14**	**9**	**8**	**9**	**60**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 4: 120 Minimum credits required at level 4: 120

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT05101	Calculus	2	1	0	1	**6**
2	GDT05102	Technical Writing Skills	2	1	0	1	6
3	WST05103	Civil Engineering CAD Applications	2	1	2	1	9
4	WST05101	Topographic Surveying	2	1	4	1	12
5	GWT05102	Principles of Cartographic Design	2	1	2	1	9
6	IPT05101	Industrial Practical Training	0	0	0	0	10
	Total		**10**	**7**	**8**	**7**	**58**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
7	GDT05204	Coordinate Geometry	2	0	1	1	6
8	GDT05205	Computer Office Applications	2	1	2	1	9
9	GWT05203	Basic Geographic Information System (GIS)	2	1	2	1	9
10	GWT05204	Photogrammetry	2	1	2	1	9
11	GWT05205	Cadastral Surveying	2	2	4	2	15
12	GWT05206	Legal Aspect of Cadastral Surveying	2	2	0	2	9
13	GWT05207	Satellite Surveying	2	1	2	1	9
	Total		**14**	**7**	**13**	**9**	**65**

L=Lectures P=Practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 5: 123 Minimum credits required at level 5: 120

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT06101	Basics of Computer Programming	2	1	0	1	7
2	GWT06101	Remote Sensing	2	0	2	2	9
3	GWT06102	Digital Photogrammetry	2	0	2	2	9
4	GWT06103	Engineering Surveying	2	1	4	1	12
5	GWT06104	Land Law	2	1	0	1	6
6	GWT06105	Codes of ethics in Geomatics Practice	2	1	0	1	6
7	IPT06101	Industrial practical training	0	0	0	0	10
	Total		**12**	**4**	**8**	**8**	**59**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT06202	Supervisory Techniques	2	1	0	1	6
2	GWT06206	Geographic Information System (GIS)	2	1	2	1	9
3	GWT06207	Digital Cartography	2	1	2	1	9
4	GWT06208	Estimation of Areas and Earthworks	2	1	2	1	9
5	GWT06209	Land Administration	2	1	0	1	6
6	GWT06210	Management of Geomatics Projects	2	1	0	1	6
7	GWT06211	Mining Survey	2	1	2	1	9
8	PRJ06201	Project Work	0	0	0	0	10
	Total		**14**	**7**	**8**	**7**	**64**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 6: 123 Minimum credits required at level 6: 120

7.1.1.25 Basic Technician Certificate in Community Deveopment for Water and Sanitation–NTA Level 4

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT04102	Basic Computer Application	2	1	2	1	9
2	CDT04101	Community Organizing Skills	2	2	1	2	10
3	CDT04102	Community Empowerment Skills	2	2	1	2	10
4	WLT04104	Health Sanitation and Water	2	1	2	1	9
5	CDT04103	Elementary Bookkeeping	2	2	0	1	7
6	CDT04104	Public Relation Skills	2	2	1	2	9
7	HMT04101	Basics of Hydrology and Meteorology	2	1	0	1	6
	Total		**14**	**11**	**7**	**10**	**60**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT04203	Communication & Technical report writing skills	2	1	0	1	6
2	GCT04204	Descriptive Statistics	2	1	0	1	6
3	GDT04206	Entrepreneurship	2	1	0	1	6
4	CDT04205	Sociology in Water Sector	3	2	1	2	12
5	CDT04206	Basics of Micro-Economics	3	1	2	1	10
6	CDT04207	Gender Issues in Water Sector	3	1	2	1	10
7	CDT04208	Records Keeping in Water Sector	3	1	0	1	10
	Total		**18**	**8**	**5**	**8**	**60**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 4: 120 Minimum credits required at level 4: 120

7.1.1.26 Technician Certificate in Community Deveopment for Water and Sanitation– NTA Level 5

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GCT05101	Supervisory Techniques and Ethics	2	1	0	1	6
2	CDT05101	Community Development Theory and Practice	2	2	0	2	9
3	CDT05102	Community Mobilization and Engagement in Water Sector	2	2	0	1	8
4	CDT05103	Gender And Development in Water Sector	2	1	0	1	6
5	CDT05104	Fundamental Facilitation Skills	2	1	0	1	6
6	CDT05105	Legal And Regulatory Frameworks	2	2	0	2	9
7	CDT05106	Community Psychology	2	1	0	1	6
8	IPT05101	Industrial Practical Training	0	0	7	0	10
	Total		**14**	**10**	**7**	**9**	**60**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	GDT05205	Computer Office Applications	2	1	2	1	9
10	CDT05207	Social Planning Skills	2	1	1	1	8
11	CDT05208	Lobbying And Advocacy for Community Change	2	2	0	2	9
12	CDT05209	Community Leadership Skills	2	1	2	1	9
13	CDT05210	Community Participation Skills	2	1	2	1	9
14	CDT05211	Conflict Management Skills	2	1	1	1	7
15	CDT05212	Basics of Project Planning and Management	2	1	2	1	9
	Total		**14**	**8**	**10**	**8**	**60**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 5: 120 Minimum credits required at level 5: 120

7.1.1.27 Ordinary Diploma Certificate in Community Deveopment for Water and Sanitation–NTA Level 6

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GCT06101	Financial Management Skills	2	2	0	1	7
2	GCT06102	Data Processing for water and sanitation projects	2	2	0	1	8
3	CDT06101	Management of Community Water Associations	2	1	0	1	6
4	CDT06102	Research Application	2	2	1	1	9
5	CDT06103	Management of Water and Sanitation Projects	2	2	1	1	9
6	CDT06104	Participatory Planning for Water Sector	3	2	1	2	12
7	CDT06105	Population Issues and Development	2	1	0	1	6
8	IPT06101	Industrial Practical Training	0	0	7	0	10
	Total		**15**	**12**	**10**	**8**	**67**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	CDT06206	Water and Related Policies	2	1	1	1	9
10	CDT06207	Community Leadership Skills in Water and Sanitation Projects	2	1	0	1	6
11	CDT06208	Concepts of Administrative Laws	0	0	7	0	12
12	WST06208	Construction Management	2	2	0	1	8
13	WST06210	Non – Revenue Water Management	2	1	0	1	6
14	HMT06205	Principles of IWRM and Climate Change	2	1	0	1	6
15	PRJ06201	Project Work	0	0	7	0	10
	Total		**10**	**6**	**15**	**5**	**57**

L=Lectures P=Practical work T=Tutorials and AS=Assignment

Total Credits at NTA Level 6: 124 Minimum credits required at level 6: 120

7.1.1.28 Higher Diploma in Engineering –PRE-NTA Level 7 Programme

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GSP07101	Engineering Computer Application	2	1	2	0	7
2	HDP07101	Fundamental of Hydrogeology	2	1	2	0	8
3	HYP07101	Fundamental of Hydrology and Meteorology	2	1	2	1	9
4	WSP07101	Basics of Engineering Survey	2	1	2	1	9
5	WSP07102	Civil Engineering Material	2	1	2	0	8
6	WSP07103	Basics of Engineering Drawing	2	1	2	1	9
7	IEP07101	HydroSoil Sampling Techniques	2	2	3	1	12
	Total		**14**	**8**	**15**	**4**	**62**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
8	GSP07202	Technical Report Writing	2	1	0	1	6
9	HDP07202	Aquifer Test and Monitoring	2	1	2	0	8
10	WSP07204	Technical Drawing	2	1	2	1	9
11	HYP07202	Processing of Hydrological and meteorological data	2	1	2	0	8
12	IEP07202	Soil Science	2	1	3	1	10
13	WSP07205	Construction Technology	2	1	2	1	9
14	IPT07201	Industrial Practical Training	0	0	5	0	8
	Total		**12**	**6**	**16**	**4**	**58**

L=lectures P=practical work T=Tutorials and AS=Assignment

Total Credits at Pre-NTA Level 7: 120 Minimum credits required at Pre-level 7:120

7.1.1.29 Higher Diploma in Water Resources and Irrigation Engineering –NTA Level 7

SEMESTER 1: Modules

S/N	Module code	Module Name	Distribution of hrs/wk				Credits
			L	T	P	AS	
1	GSU07101	Calculus	2	2	0	2	6
2	GSU07102	Development Studies	2	1	0	1	4
3	WRU07101	Water Quality Monitoring	2	0	3	1	6
4	WRU07102	Engineering Surveying	2	0	3	1	6
5	HYU07101	Hydrological Processes	2	2	2	2	8
6	WRU07103	Fluid Mechanics and Open Channel Hydraulics	2	0	3	1	6
7	WRU07104	Irrigation Soil-Plant-Water Relationships	2	0	3	1	6
8	WSU07105	Structural Analysis	2	0	1	1	4
	Total		**16**	**5**	**15**	**10**	**46**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	GSU07204	Numerical analysis	2	2	0	1	6
10	HYU07202	Hydrological Analysis	2	2	2	1	10
11	WQU07210	Environmental Health and Epidemiology	2	0	0	1	5
12	WRU07206	Reinforced Concrete Design	2	0	2	1	8
13	WRU07207	Design of Steel and Timber Structures	2	0	2	1	7
14	WRU07208	Principles of Remote Sensing and GIS	2	1	2	1	9
15	WRU07209	Water Treatment Processes	2	0	2	1	6
16	WRU07210	Planning and Design of Water Supply Systems	2	1	2	1	9
	Total		**16**	**6**	**12**	**8**	**60**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 3: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GSU07304	Linear Algebra	2	2	0	0	4	6
	Sub Total hrs/wk	**2**	**2**	**0**	**0**	**4**	**6**
	CORE MODULES						
WRU07316	Planning and Design of Water Supply Systems	2	1	1	1	5	8
WRU07317	Control Surveying	2	1	2	0	5	8
WRU07318	Design of Timber Structures	2	2	0	0	4	6
WRU07319	Construction Management	2	2	0	0	4	6
WRU07320	Planning and Design of Irrigation Systems	2	2	1	1	6	9
WRU07321	Ground Water Resources Evaluation	2	2	0	0	4	6
WRU07322	Principles of GIS	2	0	2	0	4	6
WRU07323	Engineering Geology	2	2	0	1	5	8
WRU07324	Foundation Engineering	2	2	0	0	4	6
	Sub Total hrs/wk	**18**	**1**	**6**	**3**	**41**	**63**
	Total Contact hrs/wk	**20**	**1**	**6**	**3**	**45**	**69**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 4: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
FUNDAMENTAL MODULES							
GSU07405	Probability and Statistics	2	2	0	0	4	6
GSU07406	Entrepreneurship	2	1	0	0	3	4
GSU07407	Research Methods	2	1	0	1	4	6
	Sub Total hrs/wk	**6**	**4**	**0**	**1**	**1**	**16**
	CORE MODULES						
WRU07426	Construction of Water Supply Systems	2	1	2	1	6	9
WRU07427	Dams Engineering	2	2	0	0	4	6
WRU07428	Construction of Irrigation	2	2	1	0	5	7
WRU07429	Water Supply Design	2	0	1	0	3	4
WRU07430	Integrated Water Resources	2	1	0	1	4	6
WRU07431	Quantity Surveying	2	2	0	0	4	6
WRU07432	Water Treatment	2	1	2	1	6	9
WRU07433	Industrial Practical	-	-	-	-	-	8
	Sub Total hrs/wk	**14**	**9**	**6**	**3**	**33**	**54**
	Total Contact hrs/wk	**20**	**13**	**6**	**4**	**44**	**80**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 7: 274 Minimum credits required at level 7:240

7.1.1.30 Bachelor's Degree in Water Resources and Irrigation Engineering – NTA Level 8

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	CORE MODULES						
WRU08101	Planning and Design of Sewerage Systems	2	2	2	2	8	12
WRU08102	Solid Waste Management	2	2	0	2	6	9
WRU08103	Procurement Practice	2	2	0	2	6	9
WRU08104	Financial Management	2	1	0	1	4	6
WRU08105	Water and Environmental Law	2	2	0	4	8	12
WRU08106	Project Conceptualization	0	0	0	0	0	10
	Total Contact hrs/wk	**10**	**9**	**2**	**11**	**32**	**58**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	CORE MODULES						
WRU08207	Construction of Sewerage Systems	2	2	0	2	6	9
WRU08208	Contract Management	2	2	0	2	6	9
WRU08209	O&M of Water and Irrigation Systems	2	2	0	4	8	12
WRU08210	Human Resources Management	2	2	0	0	4	6
WRU08211	Physical Resources Management	2	2	0	0	4	6
WRU08212	Environmental Impact Assessment and Audit	2	2	0	3	7	10
WRU08213	Wastewater Treatment Technology	2	2	2	2	8	12
WRU08214	Project Realization	**0**	**0**	**0**	**0**	**0**	10
	Total Contact hrs/wk	**14**	**14**	**2**	**13**	**43**	**74**

L=lectures P=practical work T=Tutorials and AS=Assignment

7.1.1.31 Higher Diploma in Sanitation Engineering–NTA Level 7

SEMESTER 1: Modules

S/N	Module code	Module title	Distribution of hrs/wk				Credits
			L	T	P	AS	
1	GSU07101	Calculus	2	2	0	2	9
2	GSU07102	Development Studies	2	1	0	1	6
3	WRU07102	Engineering Surveying	2	0	3	1	9
4	WRU07103	Fluid Mechanics and Open Channel Hydraulics	2	0	3	1	9
5	WSU07105	Structural Analysis	2	0	1	1	6
6	SEU07101	Public Health and Hygiene	2	1	3	2	12
7	WRU07101	Water Quality Monitoring	2	0	3	1	9
	Total		**14**	**4**	**13**	**9**	**60**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
8	GSU07204	Numerical analysis	2	2	0	1	7
9	SEU07203	Wastewater Treatment	2	2	2	2	12
10	SEU07204	Planning of Sanitation Systems and Structures	2	1	3	2	12
11	WQU07210	Environmental Health and Epidemiology	2	0	0	1	5
12	WRU07206	Reinforced Concrete Design	2	0	2	1	8
13	WRU07207	Design of Steel and Timber Structures	2	0	2	1	7
	WRU07208	"Principles of Remote sensing and GIS	2	1	2	1	9
	Total		**14**	**6**	**11**	**9**	**60**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 3: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GSU07304	Linear Algebra	2	2	0	0	4	6
	Sub Total hrs/wk	**2**	**2**	**0**	**0**	**4**	**6**
	CORE MODULES						
SEU07305	Planning and Design of Wastewater and Feacal Sludge Systems	2	2	2	2	8	**12**
WRU07317	Control Surveying	2	1	2	0	5	**8**
SEU07306	Introduction to Non-Sewered and Urban Sanitation	2	2	0	2	6	**9**
WRU07319	Construction Management	2	2	0	0	4	**6**
WRU07322	Principles of GIS	2	0	2	0	4	**6**
WRU07323	Engineering Geology	2	2	0	1	5	**8**
WRU07324	Foundation Engineering	2	2	0	0	4	**6**
	Sub Total hrs/wk	**14**	**11**	**6**	**5**	**36**	**55**
	Total Contact hrs/wk	**18**	**14**	**6**	**3**	**41**	**61**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 4: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GSU07405	Probability and Statistics	2	2	0	0	4	6
GSU07406	Entrepreneurship	2	1	0	0	3	4
GSU07407	Research Methods	2	1	0	1	4	6
	Sub Total hrs/wk	**6**	**4**	**0**	**1**	**11**	**16**
	CORE MODULES						
SEU07407	Construction of Sanitation Systems and structures	2	1	3	2	8	12
SEU07408	Sanitation Service Delivery/Value Chain	2	2	0	0	4	6
WRU07431	Quantity Surveying	2	2	0	0	4	6
SEU07409	Wastewater and Feacal Sludge Treatment	2	2	2	2	6	12
SEU07410	IPT	0	0	0	0	0	8
	Sub Total hrs/wk	**8**	**7**	**5**	**4**	**22**	**44**
	Total Contact hrs/wk	**16**	**11**	**5**	**5**	**33**	**60**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment
Total Credits at NTA Level 7: 240 Minimum credits required at level 7:240

7.1.1.32 Bachelor's Degree in Sanitation Engineering – NTA Level 8

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	CORE MODULES						
SEU08101	Procurement Procedures in Sanitation	2	2	0	4	8	12
SEU08102	Leadership Skills	2	2	0	2	6	12
SEU08103	Supervisory Skills	2	2	0	4	8	12
WRU08104	Financial Management	2	1	0	1	4	6
SEU08104	Wastewater and feacal Sludge Policies, Standards, Laws and Regulations	2	2	0	4	8	**12**
	Total Contact hrs/wk	**10**	**9**	**0**	**13**	**32**	**54**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	CORE MODULES						
SEU08206	Contract Management in Sanitation	2	2	0	2	6	**9**
SEU08207	Monitoring and Evaluation of Wastewater and feacal Sludge Management Systems	2	2	0	2	6	**12**
SEU08208	Shit Flow Diagram and other Sanitation Tools and Approaches	2	2	2	2	8	**12**
SEU08209	Environmental and Social Impact Assessment	2	1	2	1	6	**9**
WRU08210	Human Resources Management	2	2	0	0	4	6
SEU08210	Wastewater and feacal Sludge Treatment	2	2	2	2	8	**12**
SEU08211	Project II	0	0	0	0	0	**10**
	Total Contact hrs/wk	**12**	**12**	**6**	**12**	**42**	**67**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

Total Credits at NTA Level 8: 121 Minimum credits required at level 8:120

7.1.1.33 Higher Diploma in Community Development in Water Supply and Sanitation –NTA Level 7

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Total	Credits
			L	T	P	AS		
1	GCU07101	Fundamentals of Algebra	2	2	0	1	5	8
2	GSU07102	Development Studies	2	1	0	1	4	6
3	CDU07101	Essentials of Facilitation Techniques	2	2	1	2	7	10
4	CDU07102	Community Mobilization in Water and Sanitation Projects	3	2	1	2	9	12
5	CDU07103	Principles of Customer service	3	2	1	2	9	12
6	CDU07104	Sanitation and Hygiene Practices	3	2	1	2	9	12
	Total		**15**	**11**	**4**	**10**	**43**	**60**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
7	CDU07205	Community Participatory Approaches	3	2	1	2	12
8	CDU07206	Customer Management	3	2	1	2	12
9	GCU07202	Descriptive Statistics	2	2	0	1	9
10	GCU07203	Communication Skills	2	2	0	1	10
11	GCU07204	Office Applications	2	2	3	1	12
12	WQU07210	Environmental Health and Epidemiology	2	0	0	1	5
	Total		**14**	**10**	**5**	**8**	**60**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 3: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GCU07313	Business and Entrepreneurship	2	2	0	2	6	9
GCU07314	Computer Applications	2	3	0	2	7	10
	Sub Total hrs/wk	**4**	**5**	**0**	**4**	**13**	**19**
	CORE MODULES						
CDU07315	Customer Management	2	2	2	2	8	**12**
CDU07316	Customer Service in Water Supply and Sanitation Projects	2	2	0	2	6	**9**
CDU07317	Principles of Customer Satisfaction	2	2	0	2	6	**9**
CDU07318	Community Participatory Facilitation Approaches	2	2	2	2	8	**12**
	Sub Total hrs/wk	**8**	**8**	**4**	**8**	**28**	**42**
	Total Contact hrs/wk	**12**	**13**	**4**	**12**	**41**	**61**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 4: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GCU07419	Research Methodology	2	2	0	2	6	9
	Sub Total hrs/wk	**2**	**2**	**0**	**2**	**6**	**9**
	CORE MODULES						
CDU07420	Facilitation Techniques.	2	2	1	2	7	10
CDU07421	Customers Expectation Management	2	2	1	2	7	10
CDU07422	Community Hygiene and Sanitation Facilitation	2	2	2	2	8	12
CDU07423	Community Heath Improvement	2	2	0	2	6	9
CDU07424	Industrial Practical Training	0	0	0	0	0	10
	Sub Total hrs/wk	**8**	**8**	**4**	**8**	**28**	**51**
	Total Contact hrs/wk	**10**	**10**	**4**	**10**	**34**	**60**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment
Total Credits at NTA Level 7: 242 Minimum credits required at level 7:240

7.1.1.34 Bachelor's Degree in Community Development in Water Supply and Sanitation – NTA Level 8

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GCU08101	Information and Communication Technology	2	0	3	0	5	8
GCU08102	Financial Management	2	2	0	0	4	6
	Sub Total hrs/wk	**4**	**2**	**3**	**0**	**9**	**14**
	CORE MODULES						
CDU08103	Sustainability of Water Supply and Sanitation Projects	2	0	2	3	5	8
CDU08104	Legal and Regulatory Framework	2	2	0	0	4	6
CDU08105	Institutional Framework and Management	2	0	2	0	4	6
CDU08106	Land Acquisition and Resettlement plans Processes	2	2	0	2	6	9
CDU08107	Stakeholders and Community Consultations	2	2	0	2	6	9
CDU08108	Project Conceptualization	0	0	0	0	0	10
	Sub Total hrs/wk	**10**	**6**	**4**	**7**	**25**	**48**
	Total Contact hrs/wk	**14**	**8**	**7**	**7**	**34**	**62**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	CORE MODULES						
CDU08209	Customer Relations Management Processes	2	2	0	2	6	9
CDU08210	Project Management	2	2	0	0	4	6
CDU08211	Human Resources Management	2	2	0	0	4	6
CDU08212	Environmental and Social Impact Assessment and Audit	2	2	0	0	4	6
CDU08213	Physical Resources Management	2	2	0	2	6	9
CDU08214	Fundamentals of Integrated Water Resources Management (IWRM)	2	2	0	2	6	9
CDU08215	Water, Wastewater and Feacal Sludge Quality Services in Management of Water Supply and Sanitation Projects	2	2	0	0	4	6
CDU08216	Project Realization	0	0	0	0	0	10
	Total Contact hrs/wk	**14**	**14**	**0**	**6**	**34**	**61**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

Total Credits at NTA Level 8: 123 Minimum credits required at level 8:120

7.1.1.35 Higher Diploma in Plumbing And Service Engineering –NTA Level 7

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GSU07101	Calculus	2	2	0	2	9
2	GSU07102	Development Studies	2	1	0	1	6
3	WRU07103	Fluid Mechanics and Open Channel Hydraulics	2	0	3	1	9
4	PEU07102	Building Technology	2	1	2	1	9
5	WRU07102	Engineering Surveying	2	0	3	1	9
6	PEU07103	Computer Aided Design Software	2	0	3	1	9
7	PEU07104	Plumbing Component and Equipment	2	1	4	1	12
	Total		**14**	**5**	**15**	**8**	**63**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
8	GSU07204	Numerical Analysis	2	2	0	1	7
9	PEU07205	Plumbing Systems Design	2	1	4	2	12
10	PEU07206	Pipeline Technology	2	1	2	1	9
11	PEU07207	Green Plumbing	2	0	2	1	7
12	WRU07208	Principles of Remote Sensing and GIS	2	1	2	1	9
13	WRU07214	Water Quality Monitoring	2	1	2	1	9
14	WSU07207	Soil Mechanics	2	1	2	1	9
	Total		**14**	**7**	**14**	**8**	**62**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 3: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
16	IPT07301	Industrial Practical Training I	0	0	5	0	8
17	PEU07309	Green Plumbing	2	0	2	1	7
18	PEU07310	Design of Fire Protection System	2	0	3	1	9
19	PEU07311	Heating, Ventilation and Air Conditioning system	2	1	4	1	12
20	PEU07312	Design of Petroleum and Gas System	2	0	3	1	9
	Total		**8**	**1**	**17**	**4**	**45**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 4: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
21	GSU07410	Probability and Statistics	2	2	0	0	6
22	GSU07411	Entrepreneurship	2	1	0	0	4
23	GSU07412	Research Methodology	2	0	1	1	6
24	PEU07413	Plumbing of Irrigation Systems	2	1	2	1	9
25	PEU07414	Pump and pumping system	2	1	2	1	9
26	PEU07416	Insulation of the Plumbing System	2	0	3	1	9
27	PEU07417	Plumbing Project Cost Estimation	2	0	3	1	9
	Total		**14**	**5**	**11**	**5**	**52**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 7: 244 Minimum credits required at level 7:240

7.1.1.36 Bachelor's Degree in Plumbing and Service Engineering – NTA Level 8

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours Per Week				Credits
			L	T	P	AS	
1	IPT08101	Industrial Practical Training II	0	0	5	0	8
2	PEU08101	Installation of Fire Protection System	2	1	2	1	9
3	PEU08102	O&M of Petroleum and Gas System	2	1	0	1	6
4	QSU08102	Procurement Practices	2	2	0	1	8
5	PEU08104	Project Financing Management and Control (Financial Management)	2	1	0	1	6
6	WRU08106	Water and Environmental Law	2	1	0	1	6
7	PEU08106	Installation of HVAC System	2	1	2	1	6
8	PRJ08101	Project Conceptualization	0	0	7	0	10
	Total		**12**	**6**	**16**	**6**	**60**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	PEU08208	Construction of Petroleum and Gas System	2	2	3	1	12
10	WRU08103	Procurement and Contract Management	2	1	1	0	6
11	PEU08210	O&M of Fire Protection System	2	1	2	1	9
12	PEU08211	Engineering Ethics and Values	2	1	0	1	6
13	PEU08212	Petroleum and Gas Laws	2	2	0	2	9
14	WRU08208	Environmental Impact Assessment and Audit	2	1	0	1	6
15	PRJ08201	Project Realization	0	0	7	0	10
	Grand Total		**12**	**9**	**12**	**7**	**60**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 7: 120 Minimum credits required at level 8:120

7.1.1.37 Higher Diploma in Quantity Surveying for Water and Sanitation – NTA Level 7

SEMESTER 1: Modules

S/N	Code	Module Title	Scheme of Study, hrs/wk				Credit
			L	T	P	AS	
1	GSU07101	Calculus	2	2	0	2	9
2	GSU07102	Development Studies	2	1	0	1	6
3	WRU07103	Fluid Mechanics and Open Channel Hydraulics	2	0	3	1	9
4	QSU07102	Construction Materials	2	1	2	1	9
5	QSU07103	Building Construction	2	1	0	1	6
6	QSU07104	Financial Accounting	2	2	3	1	12
7	PEU07103	Computer Aided Design Software	2	0	3	1	9
8	QSU07106	Structural Design	2	1	0	1	6
	Total		**16**	**8**	**11**	**9**	**66**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	GSU07204	Numerical Analysis	2	2	0	1	7
10	QSU07207	Measurement of building Works	2	2	3	2	12
11	QSU07208	Water Supply Engineering	2	1	0	1	6
12	QSU07209	Construction of Civil Works	2	1	2	1	9
13	QSU07210	Dam Construction	2	1	2	1	9
14	QSU07211	Construction of Irrigation system	2	1	2	1	9
15	WRU07208	Principles of Remote Sensing and GIS	2	1	2	1	9
	Total		**14**	**9**	**11**	**8**	**61**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 3: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
15	WSU07314	Construction of Water Supply and Sanitation Systems	2	1	2	1	9
16	WRU07319	Construction Management	2	2	0	0	6
17	QSU07314	Project Management	2	1	0	1	6
18	QSU07315	Sanitary Engineering	2	0	2	1	8
19	SEU07407	Construction of Sanitation Systems and structures	2	1	3	2	12
20	QSU07317	Dam and Headwork Measurement	2	1	2	1	12
21	IPT07301	Industrial Practical Training I	0	0	5	0	8
	Total		**12**	**6**	**14**	**6**	**61**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 4: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
22	GSU07410	Probability and Statistics	2	2	0	0	6
23	GSU07411	Entrepreneurship	2	1	0	0	4
24	GSU07412	Research Methodology	2	0	1	1	6
25	WRU07428	Construction of Irrigation Systems	2	2	1	0	7
26	QSU07419	Measurement of Water Treatment facilities	2	2	3	1	12
27	QSU07420	Measurement of water and sanitation Transport System	2	2	3	1	12
28	QSU07421	Measurement of Structural Cabling and pump installations	2	1	3	2	12
	Total		**14**	**10**	**11**	**5**	**59**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

Total Credits at NTA Level 7: 243 Minimum credits required at level 7:240

7.1.1.38 Bachelor's Degree in Quantity Surveying for Water and Sanitation – NTA Level 8

SEMESTER 1: Modules

S/N	Code	Module Title	Scheme of Study, hrs/wk				Credit
			L	T	P	AS	
1.	QSU08101	Estimating and Price Analysis	2	2	0	1	8
2.	QSU08102	Procurement Practices	2	2	0	1	8
3.	QSU08103	Quantity Surveying Ethics	2	1	0	1	6
4.	QSU08104	Law of Contract	2	1	0	1	6
5.	QSU08105	Maintenance Management and Technology	2	1	0	1	6
6.	QSU08106	Measurement of Civil Engineering Works	2	0	2	2	9
7.	PRJ08101	Project Conceptualization	0	0	7	0	10
8.	IPT08101	Industrial Practical Training II	0	0	5	0	8
	Total		**12**	**7**	**14**	**7**	**61**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9.	QSU08209	Project Risk Management	2	1	0	1	6
10.	QSU08210	Value Management	2	0	2	0	9
11.	QSU08211	Construction Economics	2	2	0	1	8
12.	QSU08212	Construction Specifications Practice	2	2	0	2	9
13.	GSU08212	Financial Management	2	1	0	1	6
14.	QSU08213	Contract Administration	2	1	0	1	6
15.	WRU08208	Environmental Impact Assessment and Audit	2	1	0	1	6
16.	PRJ08201	Project Realization	0	0	7	0	10
	Total		**14**	**8**	**9**	**7**	**60**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

Total Credits at NTA Level 8: 121 Minimum credits required at level 8:120

7.1.1.39 Higher Diploma in Water Supply Engineering –NTA Level 7

SEMESTER 1: Modules

S/N	Code	Module Title	Scheme of Study, hrs/wk				Credit
			L	T	P	AS	
1	GSU07101	Calculus	2	2	0	2	9
2	GSU07102	Development Studies	2	1	0	1	6
3	WSU07101	Water, Wastewater and Faecal Sludge Quality Analysis	2	0	3	1	9
4	WRU07102	Engineering Surveying	2	0	3	1	9
5	PEU07103	Computer Aided Design Software	2	0	3	1	9
6	WRU07103	Fluid Mechanics and Open Channel Hydraulics	2	0	3	1	9
7	WSU07105	Structural Analysis	2	0	1	1	6
	Total		**14**	**3**	**13**	**8**	**57**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
8	GSU07206	Differential Equations and Complex Variables.	2	1	0	1	6
9	WQU07210	Environmental Health and Epidemiology	2	0	0	1	5
10	WRU07206	Reinforced Concrete Design	2	0	2	1	8
11	WRU07207	Design of Steel and Timber Structures	2	0	2	1	7
12	WRU07208	Principles of Remote Sensing and GIS	2	1	2	1	9
13	WSU07206	Planning of Water Supply Systems	2	1	2	1	9
14	WSU07207	Soil Mechanics	2	1	2	1	9
15	WSU07208	Hydrogeology	2	2	0	1	7
	Total		**16**	**6**	**10**	**8**	**60**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 3: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
15	IPT07301	Industrial Practical Training I	0	0	5	0	8
16	GSU07305	Statistics and Matrices	2	1	0	1	6
17	WSU07312	Principles of Remote Sensing and GIS	2	1	2	1	9
18	WSU07313	Engineering Geology	2	0	1	1	6
19	WSU07314	Construction of Water Supply and Sanitation Systems	2	1	2	1	9
20	WSU07315	Foundation Engineering	2	1	2	1	9
21	WSU07316	Fundamentals of Hydrology	2	1	2	1	9
22	WSU07317	Design of Timber and Steel Structures	2	1	2	1	9
	Total		**14**	**6**	**16**	**7**	**65**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 4: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
18	GSU07406	Research Methodology	2	0	1	1	6
19	WSU07418	Operation and Maintenance of Water Supply and Sanitation systems	2	1	2	1	9
20	WSU07419	Dams Engineering	2	1	2	1	9
21	WSU07420	Integrated Water Resources Management	2	0	0	2	6
22	WSU07421	Quantity Surveying	2	1	2	1	9
23	WSU07422	Management of Sanitation Systems	2	0	1	1	6
24	WSU07423	Hydrogeology	2	0	3	1	9
	Total		**14**	**3**	**19**	**8**	**62**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

Total Credits at NTA Level 7: 243 Minimum credits required at level 7:240

SEMESTER 1: Modules

S/N	Code	Module Title	Scheme of Study, hrs/wk				Credit
			L	T	P	AS	
1	IPT08101	Industrial Practical Training II	0	0	5	0	8
2	WSU08101	Water Treatment	2	1	4	1	12
3	WSU08102	Site Management and Construction Techniques	2	0	2	1	8
4	WSU08103	Physical and Financial Resources Management	2	0	1	1	6
5	WRU08105	Leadership and Human Resources Management	2	0	2	1	8
6	HYU08107	Leadership and Ethics	2	1	0	2	8
7	WSU08106	Construction Management	2	0	3	1	9
8	WQU08106	Environmental Health and Epidemiology	2	1	1	1	8
9	WRU08102	Wastewater Treatment Technology	2	1	2	0	8
10	WRU08103	Procurement and Contract Management	2	1	1	0	6
11	PRJ08101	Project Conceptualization	0	0	7	0	10
	Total		**18**	**5**	**28**	**8**	**91**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

SEMESTER 2: Modules

S/N	Code	Module Title	Scheme of Study, hrs/wk				Credit
			L	T	P	AS	
10	SEU08209	Solid Waste Management	2	1	2	0	8
11	WSU08212	Social Economic Aspect in Water Supply and Sanitation	2	0	1	1	6
12	WRU08208	Environmental Impact Assessment and Audit	2	1	0	1	6
13	WSU08214	Business and Entrepreneurship in Water Supply and Sanitation	2	0	1	1	6
14	PRJ08201	Project Realization	0	0	7	0	10
		Total	**8**	**2**	**11**	**3**	**36**

Key: L= Lecture; T= Tutorial; P= Practical; AS= Assignment

Total Credits at NTA Level 8: 129 Minimum credits required at level 8:120

7.1.1.41 Master's Degree in Water Supply and Sanitation Engineering – NTA Level 9

SEMESTER 1: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
WSG09101	Non – Revenue Water and Design of Water Transportation System	2	2	2	2	12
WSG09102	Water Treatment Plant Design and Quality Management	2	2	2	2	12
WUG09104	Management, Governance and Ethics	3	1	0	2	9
WSG09104	Sanitation System Design	2	0	2	2	12
WSG09105	Procurement and Project Management	2	2	0	2	9
WSG09106	Environmental and Risks Management	2	2	0	2	9
	Total	**12**	**8**	**6**	**12**	**60**

SEMESTER 2: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
WSG09207	Water and Sanitation System Operation and Maintenance	2	2	2	2	12
WSG09208	Water Systems Modelling	2	0	2	2	9
WSG09209	Research Methods and Publication	2	2	2	2	12
WSG09210	Monitoring and Evaluation of Water and Sanitation Operations	2	2	0	2	9
WUG09209	Water Policy and Laws	2	2	0	2	9
WSG09212	Design, Operation and Maintenance of Dams	2	2	2	0	9
	Total	**12**	**10**	**8**	**10**	**60**

SEMESTER 3: Modules

WSG09313	Master's Dissertation					**60**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 9: 180 Minimum credits required at level 9:180

7.1.1.42 Master's Degree in Sanitation Management – NTA Level 9

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	SMG09101	WASH in Emergencies	2	1	2	1	9
2	SMG09102	Behavior Change & Advocacy	2	1	2	1	9
3	SMG09103	Project Management	2	2	2	2	12
4	SMG09104	Analysis of Sanitation Flows	2	1	2	1	9
5	SMG09105	Sanitation Governance	2	1	2	1	9
6	SMG09106	Research Methods for Sanitation	2	1	2	1	9
	Total		**12**	**7**	**12**	**7**	**57**

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
7	SMG09207	Teamwork Skills Development	2	1	2	1	9
8	SMG09208	Leadership	2	1	2	1	9
9	WSG09209	Research Methods and Publication	2	2	2	2	12
10	SMG09210	Sanitation and Public Health	2	1	2	1	9
11	SMG09211	Sanitation Financing	2	1	2	1	9
12	SMG09212	Sanitation Systems and Services	2	1	2	1	9
13	SMG09213	Sanitation Technology	2	1	2	1	9
	Total		**14**	**7**	**14**	**7**	**63**

SEMESTER 3: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
14	SMG09214	Dissertation	0	0		40	**60**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 9: 180 Minimum credits required at level 9:180

7.1.2 DEPARTMENT OF WATER RESOURCES MANAGEMENT

This Department offers Ordinary Diploma (NTA Level 4 – 6) in Water Quality and Laboratory Technology, Hydrology and Meteorology and Hydrogeology and Water Well Drilling; Bachelor Degree (NTA Level 7 – 8) in Engineering Hydrology and Hydrogeology and Water Well Drilling, Water Quality and Laboratory Technology and Master Degree (NTA Level 9) in Water Resources and Utility Management and in Water Quality and Laboratory Management.

7.1.2.1 Basic Technician Certificate (BTC) Water Laboratory Technology – NTA Level 4

SEMESTER 1: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT04101	Algebra	2	1	0	1	6
GDT04102	Basic Computer Applications	2	0	2	1	6
WLT04101	Laboratory Safety Practices	2	0	2	4	12
WLT04102	Fundamentals of Water Analysis	2	2	2	2	12
WLT04103	Basics of Analytical Chemistry	2	2	2	2	12
WLT04104	Health Sanitation and Water	2	1	2	1	9
	Total	**12**	**6**	**10**	**11**	**57**

SEMESTER 2: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT04203	Communication Skill and Technical Report Writing	2	0	0	2	**6**
GDT04204	Statistics and Probability	2	1	0	1	**6**
GDT04206	Entrepreneurship	2	1	0	1	**6**
WLT04205	Water Quality Surveillance	2	2	0	2	**12**
WLT04206	Physicochemical Analysis of Water	2	2	2	2	**12**
WLT04207	General and Equilibrium Chemistry	2	2	2	2	**12**
WLT04208	Basic Microbiology	2	1	2	1	**9**
	Total	**14**	**9**	**6**	**11**	**63**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 4: 135 Minimum credits required at level 4:120

7.1.2.2 Technician Certificate (TC) Water Quality and Laboratory Technology– NTA Level 5

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT05102	Supervisory Techniques and Ethics	2	1	0	1	6
2	WLT05101	Chemical Analysis of Water	2	2	2	2	12
3	WLT05102	Instrumentation Techniques	2	1	2	1	9
4	WLT05103	Quantitative and Qualitative Chemistry	2	1	2	1	9
5	WLT05104	Morphology of Microorganisms	2	1	2	1	9
6	WLT05105	Water Treatment Processes	2	1	2	1	9
7	IPT05101	Industrial Practical Training	0	0	0	7	10
	Total		**12**	**7**	**10**	**14**	**64**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	GDT05205	Computer Office Applications	2	1	2	1	9
10	WLT05206	Microbiological Analysis of Water	2	2	2	2	12
11	WLT05207	Gravimetric and Electro Analytical Methods in Water Analysis	2	1	2	1	9
12	WLT05208	Application of Instruments in Water Analysis	2	1	2	1	9
13	WLT05209	Environmental Chemistry	2	1	2	1	9
14	WLT05210	Wastewater treatment	2	1	2	1	9
	Total		**12**	**7**	**12**	**7**	**57**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 5: 121 Minimum credits required at level 5: 120

7.1.2.3 Ordinary Diploma in Water Quality and Laboratory Technology-NTA Level 6

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GST06101	Coordinate Geometry	2	2	0	2	6	9
GST06102	Supervisory Techniques	2	1	0	1	4	6
GST06103	Computer Networks	2	0	1	1	4	6
	Sub Total hrs/wk	**6**	**3**	**1**	**4**	**14**	**21**
	CORE MODULES						
WLT06101	Water Quality Monitoring	2	0	2	2	6	9
WLT06102	Nutrients and Heavy metals analysis in water and wastewater	2	1	2	1	6	9
WLT06103	Physical Chemistry	2	1	2	1	6	9
WLT06104	Water Treatment Technologies	2	1	2	1	6	9
WLT06105	Environmental Management	2	1	2	1	6	9
WST06102	GIS and Remote sensing	2	0	2	1	5	8
	Sub Total hrs/wk	**12**	**8**	**11**	**11**	**43**	**53**
	Total Contact hrs/wk	**18**	**11**	**12**	**15**	**57**	**74**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2 Modules

Code	Module Title	Scheme of Study, hrs/wk Credit					
		L	**T**	**P**	**AS**	Total	**Credit**
	FUNDAMENTAL MODULES						
GST06204	Statistics and Probability	2	1	0	1	4	6
	Sub Total hrs/wk	**2**	**1**	**0**	**1**	**4**	**6**
	CORE MODULES						
WLT06206	Laboratory Management	2	0	2	2	6	8
WLT06207	Soil Analysis	2	0	1	1	4	6
WLT06208	Bacteria extraction and Organic matter analysis	2	2	2	2	8	12
WLT06209	Wastewater Management	2	1	2	1	6	9
HMT06205	Integrated Water Resources Management	2	0	0	2	4	6
HMT06206	Climate Change and Variability	2	1	0	1	4	6
PRJ06201	Project Work	0	0	7	0	7	10
	Sub Total hrs/wk	**12**	**5**	**14**	**10**	**41**	**57**
	Total Contact hrs/wk	**14**	**6**	**14**	**11**	**45**	**63**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 6: 137 Minimum credits required at level 6: 120

7.1.2.4 Basic Technician Certificate (BTC) in Hydrology and Meteorology - NTA Level 4

SEMESTER 1: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT04101	Algebra	2	1	0	1	6
GDT04102	Basic Computer Application	2	0	2	2	9
HMT04101	Basics of Hydrology and Meteorology	2	0	1	1	6
HMT04102	Installation of Hydrological and Meteorological Instruments	2	2	3	1	12
WST04101	Technical Drawing	2	1	2	1	9
WST04102	Construction materials	2	2	2	2	12
	Total	**12**	**6**	**10**	**8**	**54**

SEMESTER 2: Modules

Module Code	Module Name	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT04203	Communication Skills & Technical Report Writing	2	1	0	1	6
GDT04204	Statistics and Probability	2	1	0	1	6
GDT04205	Mechanics and Fluid Dynamics	2	1	0	1	6
GDT04206	Entrepreneurship	2	2	1	1	6
HMT04203	Maintenance of Hydrological and Meteorological Instruments	2	2	3	1	12
HMT04204	Collection of Hydrological and Meteorological Data	2	2	3	1	12
WST04206	Civil Engineering Drawing	2	1	2	1	9
WST04209	Basic Surveying	2	1	2	1	9
	Total	**16**	**10**	**11**	**9**	**66**

L=Lectures, T=Tutorials, P=Practical Work, and AS=Assignments
Total Credits at NTA Level 4: 120

7.1.2.5 Technician Certificate (TC) in Hydrology and Meteorology - NTA Level 5

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT05101	Calculus	2	1	0	1	6
2	GDT05102	Supervisory Techniques and Ethics	2	1	0	1	6
3	GDT05103	Thermodynamics	2	1	0	1	6
4	HMT05101	Investigations for establishing of hydrometric and meteorological stations	2	1	2	1	9
5	HMT05102	Establishment of hydrometric and meteorological stations	2	2	2	2	12
6	WST05101	Topographic surveying	2	2	2	2	12
7	WST05104	Quantity Surveying	2	1	2	1	9
8	IPT05101	Industrial Practical Training	0	0	0	7	10
	Total		**14**	**9**	**8**	**16**	**70**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	GDT05204	Coordinate Geometry	2	1	0	1	6
10	GDT05205	Computer Office Applications	2	1	2	1	9
11	HMT05203	Maintenance of hydrological and meteorological stations	2	0	2	2	12
12	HMT05204	Processing of Hydrological and meteorological data	2	2	2	2	12
13	WST05210	Basics of Procurement Practice	2	1	2	3	12
	Sub total		**10**	**5**	**8**	**9**	**51**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 5: 121 Minimum credits required at level 5: 120

7.1.2.6 Ordinary Diploma in Hydrology and Meteorology - NTA Level 6

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GST06101	Coordinate Geometry	2	2	0	2	6	9
GST06102	Supervisory Techniques	2	1	0	1	4	6
GST06103	Computer Networks	2	0	1	1	4	6
	Sub Total hrs/wk	**6**	**3**	**1**	**4**	**14**	**21**
	CORE MODULES						
HMT06101	Basic Design of Hydrometric and Meteorological Networks	2	2	2	2	8	12
HMT06102	Basic Hydrological Analysis	2	2	2	2	8	12
HMT06103	Basic Meteorological Analysis	2	2	0	2	6	12
WST06102	GIS and Remote sensing	2	0	2	1	5	8
WST06103	Hydraulics	2	1	2	1	6	9
	Sub Total hrs/wk	**10**	**7**	**8**	**8**	**33**	**53**
	Total Contact hrs/wk	**16**	**11**	**8**	**12**	**47**	**74**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GST06204	Statistics and Probability	2	1	0	1	4	6
	Sub Total hrs/wk	**2**	**1**	**0**	**1**	**4**	**6**
	CORE MODULES						
HMT06204	Fundamentals of Agro, Marine and Environmental Meteorology	2	2	2	2	8	12
HMT06205	Integrated Water Resources Management	2	0	0	2	4	6
HMT06206	Climate Change and Variability	2	1	0	1	4	6
WST06207	Control Surveying and Setting Out	2	1	2	1	6	9
WST06211	Commercial and Customer Orientation	2	0	0	2	4	6
PRJ 06201	Project Work	0	0	7	0	7	10
	Sub Total hrs/wk	**10**	**6**	**11**	**08**	**35**	**49**
	Total Contact hrs/wk	**12**	**7**	**11**	**09**	**39**	**55**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 6: 129 Minimum credits required at level 6: 120

7.1.2.7 Basic Technician Certificate (BTC) in Hydrogeology and Water Well Drilling - NTA Level 4

SEMESTER 1: Modules

Module Code	Module Title	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT04101	Algebra	2	1	0	1	6
GDT04102	Basic Computer Application	2	0	2	2	9
HDT04101	Shallow Well Surveys	2	2	0	2	9
HDT04102	Principles of Hydrogeology	2	2	0	2	9
HDT04103	Water Wells Protection	2	1	2	1	9
WST04101	Technical Drawing	2	1	2	1	9
WST04102	Construction materials	2	2	2	2	12
	Total	**14**	**9**	**8**	**11**	**63**

SEMESTER 2: Modules

Module Code	Module Title	Distribution of Hours per Week				Credits
		L	T	P	AS	
GDT04203	Communication Skills & Technical report writing	2	1	0	1	6
GDT04204	Statistics and Probability	2	1	0	1	6
GDT04205	Mechanics and Fluid Dynamics	2	1	0	1	6
GDT04206	Entrepreneurship	2	1	0	1	6
HDT04204	Construction of Shallow Wells	2	0	2	2	9
HDT04205	Maintenance of Shallow Wells and Equipment	2	0	2	2	9
WST04205	Soil and Water Sampling Techniques	2	0	1	1	6
WST04209	Basic Surveying	2	1	2	1	9
	Total	**16**	**5**	**7**	**10**	**57**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 4: 120 Minimum credits required at level 4: 120

7.1.2.8 Technician Certificate (TC) in Hydrogeology and Water Well Drilling - NTA Level 5

SEMESTER 1: Modules

S/N	Code	Module Title	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GDT05101	Calculus	2	1	0	1	6
2	GDT05102	Supervisory Techniques and Ethics	2	1	0	1	6
3	GDT05103	Thermodynamics	2	2	0	2	9
4	HDT05101	Groundwater Prospecting	2	0	2	2	9
5	HDT05102	Fundamentals of Geology	2	2	2	2	9
6	WST05101	Topographic Surveying	2	1	4	1	12
7	WST05104	Quantity Surveying	2	1	2	1	9
8	IPT05101	Industrial Practical Training	0	0	7	0	10
	Total		**14**	**9**	**15**	**9**	**67**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
9	GDT05204	Coordinate Geometry	2	2	0	0	6
10	GDT05205	Computer Office Applications	2	2	2	0	9
11	HDT05203	Principles of Water Well Drilling	2	2	2	2	12
12	HDT05204	Applied Geophysics	2	2	2	2	9
13	HDT05205	Water Well Pollution and Protection	2	2	0	2	9
14	HDT05206	Principles of Pumping Test	2	0	2	2	9
	Total		**12**	**10**	**8**	**8**	**54**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 5: 121 Minimum credits required at level 5: 120

7.1.2.9 Ordinary Diploma in Hydrogeology and Water Well Drilling -NTA Level 6

SEMESTER 1: Modules

		Scheme of Study hrs/wk					
Code	**Module Title**	**L**	**T**	**P**	**AS**	**Total**	**Credit**
	FUNDAMENTAL MODULES						
GST06101	Coordinate Geometry	2	2	0	2	6	9
GST06102	Supervisory Techniques	2	1	0	1	4	6
GST06103	Computer Networks	2	0	1	1	4	6
	Sub Total hrs/wk	**6**	**3**	**1**	**4**	**14**	**21**
	CORE MODULES						
HDT06101	Analysis and Interpretation of Hydrogeological Data	2	2	2	2	8	12
HDT06102	Water Well Design and Construction	2	2	2	2	8	12
HDT06103	Water Well Drilling Rig Operation	2	2	2	2	8	12
WST06102	GIS and Remote Sensing	2	0	2	1	5	8
	Sub Total hrs/wk	**8**	**6**	**8**	**7**	**29**	**44**
	Total Contact hrs/wk	**14**	**9**	**9**	**11**	**43**	**65**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

Code	Module Title	L	T	P	AS	Total	Credits
	FUNDAMENTAL MODULES						
GST06204	Statistics and Probability	2	1	0	1	4	6
	Sub Total hrs/wk	**2**	**1**	**0**	**1**	**4**	**6**
	CORE MODULES						
HDT06204	Groundwater Monitoring	2	0	2	2	6	9
HDT06205	Water Well Maintenance and Rehabilitation	2	2	2	2	8	12
HDT06206	Groundwater Data Collection and Analysis	2	0	2	2	6	9
HDT06207	Groundwater Recharge and Conservation	2	2	0	2	6	9
WST06211	Commercial and Customer Orientation	2	0	0	2	4	6
HMT06205	Integrated Water Resources Management	2	0	0	2	4	6
HMT06206	Climate Change and Variability	2	1	0	1	4	6
PRJ06201	Project Work	0	0	7	0	7	10
	Sub Total hrs/wk	**14**	**5**	**13**	**13**	**45**	**67**
	Total Contact hrs/wk	**16**	**6**	**13**	**14**	**49**	**73**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 6: 138 Minimum credits required at level 6: 120

7.1.2.10 Higher Diploma in Hydrogeology and Water Well Drilling - NTA Level 7

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GSU07101	Advanced Calculus	2	0	0	2	4	6
GSU07102	Development Studies	2	0	0	1	3	4
	Sub Total hrs/wk	**4**	**0**	**0**	**3**	**7**	**10**
	CORE MODULES						
HDU07101	Principles of Hydrogeology	2	0	2	1	5	8
HDU07102	Fundamentals of Geology	2	1	1	1	5	8
HDU07103	Introduction to Hydrology	2	1	1	1	5	8
HDU07104	Theory of Groundwater Flow	2	2	1	1	6	9
HDU07105	Basic Hydrological Data Processing	2	1	1	1	5	8
HDU07106	Measuring and Monitoring Groundwater	2	1	1	1	5	8
HDU07107	Geohydrochemistry and Pollution	2	1	1	1	5	8
	Sub Total hrs/wk	**14**	**7**	**8**	**7**	**36**	**57**
	Total Contact hrs/wk	**18**	**7**	**8**	**10**	**43**	**67**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GSU07203	Differential Equations and Complex Variables.	2	0	2	1	5	8
	Sub Total hrs/wk	**2**	**0**	**2**	**2**	**5**	**8**
	CORE MODULES						
HDU07208	Geophysical Methods for Groundwater Investigations	2	2	1	1	6	9
HDU07209	Groundwater Data Analysis	2	2	0	1	5	8
HDU07210	Well Drilling Techniques	2	2	1	1	6	9
HDU07211	Well Completion	2	0	1	1	4	6
WRU07211	Principles of Remote Sensing	2	1	2	1	6	9
HDU07212	Groundwater Resources Management	2	2	0	1	5	8
HDU07213	IPT 1	0	0	0	0	0	8
	Sub Total hrs/wk	**12**	**9**	**5**	**6**	**32**	**57**
	Total Contact hrs/wk	**14**	**9**	**7**	**8**	**37**	**65**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 3: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GSU07304	Linear Algebra	2	2	0	0	4	6
	Sub Total hrs/wk	**2**	**2**	**0**	**0**	**4**	**6**
	CORE MODULES						
HDU07314	Hydrogeological Mapping	2	1	1	1	5	**8**
HDU07315	Well Rehabilitation	2	1	1	0	4	6
HDU07316	Maintenance of Drilling Equipment	2	1	1	0	4	**6**
HDU07317	Geophysical Well Logging Techniques	2	1	1	1	5	**8**
HDU07318	Professional Report Writing	2	2	0	0	4	6
WRU07319	Supervisory Techniques	2	2	0	0	4	**6**
WRU07321	Ground Water Resources Evaluation	2	2	0	0	4	**6**
WRU07322	Principles of GIS	2	0	2	0	4	**6**
WRU07323	Engineering Geology	2	2	0	1	5	**8**
	Sub Total hrs/wk	**18**	**11**	**6**	**4**	**39**	**60**
	Total Contact hrs/wk	**20**	**13**	**6**	**4**	**43**	**66**

L=lectures P=practical work T=Tutorials and AS=Assignment

SEMESTER 4: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GSU07405	Probability and Statistics	2	2	0	0	4	6
GSU07406	Entrepreneurship	2	1	0	0	3	4
GSU07407	Research Methods	2	1	0	1	4	6
	Sub Total hrs/wk	**6**	**4**	**0**	**1**	**11**	**16**
	CORE MODULES						
HDU07419	Pumping Test Procedures	2		1	1	4	6
HDU07420	Managing Saline Water Intrusion	2	2	0	0	4	6
WRU07430	Integrated Water Resources Management	2	1	0	1	4	6
HDU07421	IPT 2	-	-	-	-	-	8
	Sub Total hrs/wk	**6**	**3**	**1**	**2**	**12**	**26**
	Total Contact hrs/wk	**12**	**7**	**1**	**3**	**33**	**42**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 7: 240 Minimum credits required at level 7: 240

7.1.1.11 Bachelor's Degree in Hydrogeology and Water Well Drilling - NTA Level 8

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	CORE MODULES						
HDU08101	Managing Groundwater Recharge Systems	2	2	2	2	8	12
HDU08102	Contaminants Transport Mechanisms and Principles	2	2	0	2	6	9
WRU08103	Procurement Practice	2	2	0	2	6	9
WRU08104	Financial Management	2	1	0	1	4	6
WRU08105	Water and Environmental Law	2	2	0	4	8	12
HDU08103	Project Conceptualization	0	0	0	0	0	10
	Total Contact hrs/wk	**10**	**9**	**2**	**11**	**32**	**58**

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	CORE MODULES						
HDU08204	Groundwater Modelling	2	2	0	2	6	9
HDU08205	Procurement of Hydrogeological and Drilling Works	2	2	0	0	4	6
HDU08206	Hydrogeological and Drilling Contract Management	2	2	0	4	8	12
WRU08210	Human Resources Management	2	2	0	0	4	6
HDU08207	Managing Hydrogeological and Drilling Projects	2	2	0	2	6	9
WRU08212	Environmental Impact Assessment and Audit	2	2	0	3	7	10
HDU08208	Project Realization	**0**	**0**	**0**	**0**	**0**	10
	Total Contact hrs/wk	**12**	**12**	**0**	**11**	**35**	**62**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 8: 120 Minimum credits required at level 8: 120

7.1.2.12 Higher Diploma in Engineering Hydrology - NTA Level 7

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GSU07101	Calculus	2	2	0	2	9
2	GSU07102	Development Studies	2	1	0	1	6
3	HYU07101	Hydrological Processes	2	2	2	2	12
4	WRU07101	Water Quality Monitoring	2	0	3	1	9
5	WRU07102	Engineering Surveying	2	0	3	1	9
6	WRU07103	Fluid Mechanics and Open Channel Hydraulics	2	0	3	1	9
7	WSU07105	Structural Analysis	2	0	1	1	6
	Total		**14**	**5**	**12**	**9**	**60**

Key: L = Lecture; T = Tutorial; P = Practical; AS = Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
8	GSU07204	Numerical Analysis	2	2	0	1	7
9	HYU07202	Hydrological Analysis	2	2	2	1	10
10	HYU07203	Principles of Meteorology	2	2	2	1	9
11	HYU07204	Sedimentation Analysis and Control	2	2	0	2	9
12	WQU07210	Environmental Health and Epidemiology	2	0	0	1	5
13	WRU07206	Reinforced Concrete Design	2	0	2	1	8
14	WRU07207	Design of Steel and Timber Structures	2	0	2	1	7
15	WRU07208	Principles of Remote Sensing and GIS	2	1	2	1	9
	Total		**16**	**9**	**10**	**9**	**64**

SEMESTER 3: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GSU07304	Linear Algebra	2	2	0	0	4	6
	Sub Total hrs/wk	**2**	**2**	**0**	**0**	**4**	**6**
	CORE MODULES						
HYU07307	Meteorological Analysis and Forecasting	2	2	0	1	5	8
HYU07308	Groundwater Hydrology	2	2	0	1	5	8
HYU07309	Sedimentation Analysis and Control	2	0	2	0	4	6
WRU07317	Control Surveying	2	1	2	0	5	8
WRU07318	Design of Timber Structures	2	2	0	0	4	6
WRU07319	Construction Management	2	2	0	0	4	6
WRU07322	Principles of GIS	2	0	2	0	4	6
WRU07323	Engineering Geology	2	2	0	1	5	8
WRU07324	Foundation Engineering	2	2	0	0	4	6
	Sub Total hrs/wk	18	13	6	3	40	62
	Total Contact hrs/wk	20	15	6	3	44	68

Key: L = Lecture; T = Tutorial; P = Practical; AS = Assignment

SEMESTER 4: Modules

Code	Module Title	Scheme of Study, hrs/wk					Credit
		L	T	P	AS	Total	
	FUNDAMENTAL MODULES						
GSU07405	Probability and Statistics	2	2	0	0	4	6
GSU07406	Entrepreneurship	2	1	0	0	3	4
GSU07407	Research Methods	2	1	0	1	4	6
	Sub Total hrs/wk	**6**	**4**	**0**	**1**	**11**	**16**
	CORE MODULES						
HYU07410	Hydrological Analysis, Forecasting and Design	2	2	0	1	5	8
HYU07411	Planning and Design of Hydraulic Structures	2	2	0	1	5	8
HYU07412	Application of Statistics and Probability in Hydrology	2	1	0	1	4	6
WRU07430	Integrated Water Resources Management	2	1	0	1	4	6
WRU07431	Quantity Surveying	2	2	0	0	4	6
WRU07433	Industrial Practical Training II	0	0	5	0	5	8
	Sub Total hrs/wk	**10**	**8**	**5**	**4**	**27**	**42**
	Total Contact hrs/wk	**16**	**12**	**5**	**5**	**38**	**58**

Key: L = Lecture; T = Tutorial; P = Practical; AS = Assignment

Total Credits at NTA Level 7: 255 Minimum credits required at level 7: 240

7.1.1.13 Bachelor's Degree in Engineering Hydrology - NTA Level 8

SEMESTER 1: Modules

Code	Module Title	Scheme of Study, hrs/wk					
		L	T	P	AS	Total	Credit
	CORE MODULES						
HYU08101	Construction of Hydraulic Structures	2	2	4	2	10	15
HYU08102	Operation and Maintenance of Hydraulic Structures	2	2	2	2	8	12
HYU08103	Applications of Mathematical Models in Hydrology	2	1	3	4	10	15
WRU08103	Procurement Practice	2	2	0	2	6	9
WRU08104	Financial Management	2	1	0	1	4	6
WRU08105	Water and Environmental Law	2	2	0	4	8	12
WRU08107	Project Conceptualization	0	0	0	0	0	10
	Total Contact hrs/wk	**12**	**10**	**9**	**15**	**42**	**79**

Key: L = Lecture; T = Tutorial; P = Practical; AS = Assignment

SEMESTER 2: Modules

Code	Module Title	Scheme of Study, hrs/wk					
		L	T	P	AS	Total	Credit
	CORE MODULES						
WRU08209	Contract Management	2	2	0	2	6	9
WRU08211	Human Resources Management	2	2	0	0	4	6
WRU08212	Physical Resources Management	2	2	0	0	4	6
WRU08213	Environmental Impact Assessment and Audit	2	2	0	3	7	10
WRU08215	Project Realization	**0**	**0**	**0**	**0**	**0**	**10**
	Total Contact hrs/wk	**8**	**8**	**0**	**5**	**21**	**41**
	TOTAL CREDITS						**120**

Key: L = Lecture; T = Tutorial; P = Practical; AS = Assignment
Total Credits at NTA Level 7: 255 Minimum credits required at level 7: 240

7.1.2.14 Higher Diploma in Water Quality and Laboratory Technology - NTA Level 7

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	GSU07103	Application of ICT	2	1	2	0	8
2	GSU07102	Development Studies	2	1	0	1	6
3	WQU07101	Analytical Chemistry in Laboratory Analysis	2	2	3	1	12
4	WQU07102	Occupational Health and Safety	2	2	3	1	12
5	WQU07103	Technical Drawings in Laboratory Design	2	1	2	0	9
6	WQU07104	Wastewater Microbiology	2	2	3	1	12
	Total		**12**	**9**	**13**	**4**	**59**

Key: L = Lecture; T = Tutorial; P = Practical; AS = Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
7	WQU07205	Laboratory Instrumentation Techniques	2	2	2	1	10
8	WQU07206	Biological Examination of Water and Wastewater	2	2	2	1	10
9	WQU07207	Solid Waste Management	2	1	2	1	9
10	WQU07208	Water Treatment Technologies	2	2	2	2	10
11	WQU07209	Wastewater Management	2	2	2	1	10
12	WQU07210	Environmental Health and Epidemiology	2	0	0	1	5
13	WRU07208	Principles of Remote Sensing and GIS	2	1	2	1	9
	Total		**14**	**10**	**12**	**8**	**63**

Key: L = Lecture; T = Tutorial; P = Practical; AS = Assignment

SEMESTER 3: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
13	IPT07301	Industrial Practical Training I	0	0	5	0	8
14	WQU07310	Water and Wastewater Monitoring	2	2	3	1	12
15	WQU07311	Soil Chemistry and Remediation	2	3	2	1	12
16	WQU07312	Basic Hydrology	2	1	2	1	9
19	WQU07313	Toxicology and Risk Assessment	2	2	3	1	12
20	WQU07314	Faecal Sludge Management Technologies	2	1	3	1	12
	Total		**10**	**9**	**18**	**5**	**65**

Key: L = Lecture; T = Tutorial; P = Practical; AS = Assignment

SEMESTER 4: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
21	GSU07410	Probability and Statistics	2	2	0	0	6
22	GSU07411	Entrepreneurship	2	1	0	0	4
23	GSU07412	Research Methodology	2	0	1	1	6
24	WRU07430	Integrated Water Resources Management	2	1	0	1	6
25	WQU07415	Resource Recovery	2	1	3	1	10
26	WQU07416	Operation and Maintenance in Water and Wastewater Treatment Systems	2	2	3	1	12
	Total		**12**	**7**	**7**	**4**	**44**

Key: L = Lecture; T = Tutorial; P = Practical; AS = Assignment

Total Credits at NTA Level 7: 242 Minimum credits required at level 7: 240

7.1.1.15 Bachelor's Degree in Engineering Hydrology - NTA Level 8

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	WQU08101	Leadership and Communication Skills	2	1	0	1	6
2	WQU08102	Laboratory Management	2	1	2	1	9
3	HYU08104	Climate Change Disaster's Management	2	1	2	1	9
4	WQU08105	Water and Wastewater Modeling	2	1	2	1	9
5	WQU08106	Environmental Health and Epidemiology	2	1	1	1	8
6	IPT08101	Industrial Practical Training II	0	0	5	0	8
7	PRJ08101	Project Conceptualization	0	0	7	0	10
8	WRU08106	Water and Environmental Law	2	1	0	1	6
9	WRU08105	Leadership and Human Resources Management	2	0	2	1	8
	Total		**14**	**6**	**21**	**7**	**73**

Key: L = Lecture; T = Tutorial; P = Practical; AS = Assignment

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
10	WQU08210	Laboratory Hazardous Waste Management	2	2	2	1	10
11	WQU08211	Project Management in Water Quality and Laboratory Technology	2	1	2	1	9
12	WQU08212	Water Pollution Prevention and Control	2	1	2	1	9
13	WQU08213	Social Economic Aspects in Water Quality and Laboratory	2	2	2	1	10
14	WRU08208	Environmental Impact Assessment and Audit	2	1	0	1	6
15	PRJ08201	Project Realization	0	0	7	0	10
	Total		**10**	**7**	**15**	**5**	**54**

Key: L = Lecture; T = Tutorial; P = Practical; AS = Assignment

Total Credits at NTA Level 7: 255 Minimum credits required at level 7: 240

7.1.1.16 Master of Engineering in Water Resources and Utility Management - NTA Level 9

SEMESTER 1: Modules

Module Code	Module Title	Distribution of Hours per Week				Credits
		L	T	P	AS	
WUG09101	Integrated Water Resources Management	3	1	0	4	12
WUG09102	Principles of GIS and Remote Sensing	2	0	2	2	9
WUG09103	Non-Revenue Water Management	2	0	2	2	12
WUG09104	Management, Governance and Ethics	3	1	0	2	9
WUG09105	Disaster Management	2	2	0	2	9
WUG09106	Environmental and Social Impact Assessment	2	2	0	2	9
WSG09105	Procurement and Project Management	2	2	0	2	9
	Total	**14**	**6**	**4**	**14**	**60**

SEMESTER 2: Modules

Module Code	Module Title	Distribution of Hours per Week				Credits
		L	T	P	AS	
WUG09207	Procurement and Project Management	3	1	0	2	9
WUG09208	Organization Financial Resources Management	2	2	0	2	9
WUG09209	Water Policy and Laws	2	2	0	2	9
WUG09210	Transboundary Water Resources Management	3	3	0	2	12
WSG09209	Research Methods and Publication	2	2	2	2	12
WUG09212	Water Systems Modelling	2	2	0	2	9
Total		**14**	**12**	**0**	**14**	**60**

SEMESTER 3: Modules

WSG09313	Master's Dissertation					**60**

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 9: 180 Minimum credits required at level 9:180

7.1.1.17 Master of Water Quality and Laboratory Management - NTA Level 9

SEMESTER 1: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
1	WLG09101	Laboratory Management and Quality Assurance	3	0	3	2	12
2	WLG09102	Advanced Analytical Instrumentation	3	1	2	2	12
3	WLG09103	Environmental Chemistry in Aquatic Ecology	2	0	0	2	6
4	WLG09104	Emerging Issues in Water Quality Management	3	1	1	1	9
5	WLG09105	Laboratory Systems Management	3	1	3	1	12
6	WUG09106	Environmental and Social Impact Assessment	2	2	0	2	9
	Total		**17**	**4**	**9**	**10**	**60**

SEMESTER 2: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
7	WLG09207	Advanced Water and Wastewater Analysis	2	1	4	2	12
8	WLG09208	Advanced Water Treatment Technologies	3	1	3	1	12
9	WLG09209	Water Quality Modelling and Monitoring	2	2	2	2	12
10	WLG09210	Sustainable Solid and Wastewater Management	2	1	1	2	9
11	WLG09212	Environmental Governance in Water Quality	2	1	0	1	6
12	WSG09209	Research Methods and Publication	2	2	2	2	12
	Total		**13**	**8**	**10**	**10**	**60**

SEMESTER 3: Modules

S/N	Module Code	Module Name	Distribution of Hours per Week				Credits
			L	T	P	AS	
13	WSG09313	Master's Dissertation				40	60

L=lectures P=practical work T=Tutorials and AS=Assignment
Total Credits at NTA Level 9: 180 Minimum credits required at level 9:180

7.1.3 Department of General Studies

This is a service Department that provides services to all academic departments for the teaching of Mathematics, Physics, Chemistry Communication Skills, Research Methodology, Computer, Gender and Entrepreneurship.

7.1.4 Postgraduate and Continuing Education Department

This department is responsible for coordination of all short courses in the Institute. There is no restriction of entry qualifications for short course training requested by a client. The Institute provides training in specific subjects as requested and there is flexibility in time as requested by a client.

The Institute conducts more than 50 short courses in different areas of specialization, such as Hydrogeology and water well drilling, Pump Mechanics and its Electrical Installation, Water Quality Management, Water treatment, Plumbing and Pipe Fittings, Computer Aided Design (Auto CAD) and EPANET software, Electronic Topographic Surveying for Design of Water Supply Projects, Waste Water Management, etc.

Prospective course participants are required to meet entry requirements that are indicated in the application form which are specific for each course.

7.2 PROFILE OF ACADEMIC DEPARTMENTS

7.2.1 Rector/Chief Executive Officer

Dr. Adam O. Karia: PgD in Leadership at Uongozi Institute Technician (Dar es Salaam), PhD in Business Administration (Kisii University – Kenya), MSc in IT & Management PgD in IT and Management (India), Advanced Diploma in IT (UK), Diploma in Water Supply Management (Germany), Diploma in Technical Education (Kleruu) and Certificate in Civil Engineering (Misungwi).

7.2.2 Deputy Rector – Academic, Research and Consultancy

Dr. Tulinave B. Mwamila (Eng.); PhD in Civil and Environmental Engineering, (Seoul National University, South Korea) and MSc. in Water Resources Engineering (UDSM) and BSc. in Civil & Water Resources Engineering (UDSM).

7.2.3 Deputy Rector- Planning, Finance and Administration

Dr. William Senkondo (Eng.); PhD in Physical Geography (Stockholm University – Sweden), MSc. in Water Science and Engineering (UNESCO-IHE Netherlands and BSc. in Civil and Water Resources Engineering (UDSM).

7.2.4 List of Academic Staff in the Department of General Studies

Senior Tutor II and Head of Department

****Mr. Joseph B. Jumbe,*** MSc (ED) (UDSM), BSc with Education (Informatics and Mathematics) (SUA), Diploma in Business English (Sevendale Manchester England), Diploma in Education (Science) (Klerruu TC)

Assistant Lecturer

Mr. Sylvanus Alfred Ntirumolekwa MSc. in Medical Radiation Physics (Swansea, UK), BSc. in Physics & Chemistry (UDSM).

Assistant Lecturer
Ms. Lightness Eliamringi Mrema, MSc. in Mathematical Modelling (UDSM) BSc. Education (Mathematics and Computer) (UDSM).

Assistant Lecturer
Ms. Neema Aaron Mpayo**:** MA with Education (UDSM), BA with Education (UDSM), Diploma in Education (Mpwapwa TTC).

Assistant Lecturer
Mr. Dotto A. Salim, MSc. Mathematics Modelling (UDSM), and BED (SAUT-MWANZA).

Assistant Lecturer
Mr. Hassan S. Mrutu, MSc. in Information Technology and Management (Avinashillingam University-India), Advanced Diploma in Computer Science (IAA Tanzania). Security Intelligence Engineer Master Award (IBM-USA), Cyberoam Certificate Network and Security Professional (USA).

Assistant Lecturer
******Ms. Furaha Laurian Ntamanwa,*** M.A Social Work (ISW Tanzania), BD. in Social Work (ISW Tanzania), Diploma in Education (Korogwe TTC) and Certificate in Customer Care.

Assistant Lecturer
Mr. George Japhet Mdeme, MA in Education (UDSM – DUCE) and BA with Education (UDSM).

Assistant Lecturer
Mr. James Mhoja Dosa, Diploma in Library Archives and Documentation Studies (School of Library and Archives Documentations - SLADS), BSc. In Library and Information Management (Mzumbe University), Masters of Information Studies (UDSM).

Principal Tutor II

******Mr. Geofrey George Mwanahanja,*** MEd. Science Education (UDSM) and BEd. in Science (UDSM),

Senior Tutor I

******Ms. Nyamizi Luytigarda Kazungu,*** MSc. in Finance (University of Strathclyde, UK) PGD in Education (UDSM), PGD in Accountancy (IAA Tanzania), Advanced Diploma in Accountancy (DSA Tanzania).

Tutor I

Mr. Gosbert Felix Bikogoto, BSc. in Mathematics and Economics (OUT Tanzania), FTC in Water Resource Engineering, (Hydrogeology) – (RWRI).

Tutor I

Mr. Alistides Shumbusho Alfred, M.Sc. in gender and development (UDSM – Tanzania), BA in Gender and Development (WMA) Certificate in Teacher's Education Grade A (Butimba TTC)

Senior Tutor II

Mr. Abdul Salum Madodi, MSc. Mathematical Modeling (UDSM) Bed. Mathematics (IUCO Tanzania).

Tutor II

Mr. Christian Leder Hall, Bachelor of Applied Science (RMIT India University),Postgraduate Diploma in Economic Diplomacy,Centre for Foreign Relations (CFR), Postgraduate Diploma in Information Technology (AMITY India University.

Tutorial Assistant

Ms. Tumpale Alfred Mwakasangula, BSc. in Library and Information Studies (TU Tanzania) Diploma in Library Archives and Documentation Studies (School of Library and Archives Documentations -SLADS).

7.2.5 List of Academic Staff in the Department of Water Supply and Sanitation Engineering

Lecturer and Head of Department

Eng. Dr. Eunice Jesto Makungu, PhD (Hydrology) (Rhodes University SA), Msc. in Water Resources Engineering (UDSM), Bsc. in Civil and Water Resources Engineering (UDSM), Professional Engineer (P.E).

Chief Tutor II

Eng. Dr. Ezrael Josephat Massawe, PhD in Water Resources Engineering at (UDSM), MSc in Water Resources Eng. (KU/VU Belgium), BSc Civil Engineering(UDSM) PgD in Hydraulic Engineering in River Basins (HRI-Egypt),

Lecturer

Eng. Dr. Doglas Benjamin Mmasi, MSc. in Environmental Technology & Management (UDSM), B.Sc in Environmental Engineering (UDSM).

Assistant Lecturer

Eng. Dr. Livingstone Mtandizi Swilla, **PhD in Civil Engineering (2024), Mbeya University of Science and Technology (MUST) 2024,** MSc. In Civil Engineering (PFUR-Russia),R.Eng. (T),B.Sc. in Civil Engineering (PFUR-Russia)

Assistant Lecturer

Ms. Sado Lufega Masunga, MSc. in Soil & Land Management (SUA), BSc. In Agronomy (SUA)

Assistant Lecturer

****Ms. AnnaStephenMremi,*** MSc in Integrated Sanitation Management (UDSM)B. A in Geography and Environmental Studies (UDSM).

Assistant Lecturer

Mr. Frank T. Beichumila, MSc. in Chemistry (UDOM), Bachelor of Science (OUT), Full Technician in Water Resource Engineering.

Assistant Lecturer

Mr. Brian Josephat Kamoga, MSc. in Petroleum Geology (UDSM) 2017, BSc. in Engineering Geology (UDSM) 2014.

Assistant Lecturer

Ms. Dorine Sengondo Mvungi, MSc. in Construction Economics and Management (Ardhi University), BSc. in Building Economics (Ardhi University).

Senior Tutor I

Mr. Godwin Makali Lyaki, PGD (AU) Diploma (Technical Education) FTC (Civil Eng).

Senior Tutor II

Eng. Omari Juma Mazola, MSc. in Water Supply Engineering (UNESCO-IHE, Delft, Netherland), B.Sc in Environmental Engineering (UDSM)

Senior Tutor II

Eng. Sebastian Kanoli Maziku: MSc. of Science in Water Resources Management (Flinders University, Australia) and Bachelor of Science in Agricultural Engineering (SUA).

Senior Tutor II

Ms. Levina Ezekiel Assenga, Bachelor of Science in Geomatics (Ardhi University),Certificate of the Professional Surveyors (The National Council of Professional Surveyors Tanzania), Certificate of Completed the Advanced Trainer Development Course (LX Educatiuon Institute), Certificate in The Political Economy of Land Governance in Africa (University of the Western Cape)

Tutor II

Eng. Riziki Mashaka Chambuso, Professional Engineer (P.E) and BSc. in Civil and Structural Engineering (UDSM).

Tutor II

Mr. Hamis Said Mchia, BSc in Irrigation and Water Resource Engineering (Sokoine University of Agriculture).

Tutor II

Mr. Theobard Theoticus Mgaye, Bachelor Degree in Water Resource and Irrigation Engineering, Water Institute (WI), Diploma in Science and Laboratory Technology, Dar es Salaam Institute of Technology (DIT).

Tutor II

Mr. John Mwamwinsila Basil, Advanced Diploma in Community Development (Community Development Training Institute - CDTI), The Course on Participatory Method and Tools (Community Development Training Institute - CDTI), Certificate of Instructions Microcomputer Applications (University of Dar es Salaam Computing Centre), Certificate of Civil Technicians (Misungwi Community Development Technical Training Institute).

Tutorial Assistant

****Eng. Mathias J Lissu,*** Bachelor Degree in Water Resource and Irrigation Engineering (WI), Registered Graduate Engineer (ERB-Tanzania), Diploma in Irrigation Engineering (MATI-IGURUSI), Certificate in General Agriculture (MATI-TUMBI)

Tutorial Assistant

****Eng. Mathias Mhangwa Masonga,*** B.Eng. in Civil and Irrigation Engineering (Arusha Tech.), Registered Graduate Engineer (ERB- Tanzania), Diploma in Irrigation Engineering (MATI-IGURUSI), Certificate in General Agriculture (MATI-TUMBI)

Tutorial Assistant

Mr. Moses Kahabi Matogoro, Bachelor of Science in Civil Engineering (UDSM).

Tutorial Assistant

Mr. Jacob Joseph Tyenyi, BSc. in Irrigation and Water Resource Engineering (SUA), Diploma in Hydraulic Engineering in River Basin (Hydraulic Research Institute).

Tutorial Assistant

Mr. Emmanuel Venance Nguji, BSc. in Irrigation and Water Resource Engineering (Sokoine University of Agriculture – SUA).

Tutorial Assistant

Mr. Azmail Mikidadi Abdulrahman, BSc. in Applied Geology (Universityof Dododma – UDOM).

Tutorial Assistant

Ms. Violet Florence Massawe, BSc in Building Economics (Ardhi University).

Tutorial Assistant

Mr. Petro Simon Msigwa, Bachelor Degree in Water Resource and Irrigation Engineering (Water Institute –WI).

Tutor II

Mr. Mussa John Makoba, Bachelor in Mechanical Engineering (NIT).Ordinary Diploma in Auto-Electrical and Electronic Engineering(Arusha Technical Collage).

Assistant Tutor

Mr. Chacha Maro Maryenya, Ordinary Diploma in Geomatics (Ardhi Institute - Morogoro)

Assistant Tutor

Ms. Veroninca George Mgeja, Ordinary Diploma in Geomatics (Ardhi Institute - Morogoro)

Technician II

Mr. Juma Salehe Hozza, Diploma in Water Supply and Sanitation Engineering (Water Institute – WI).

Laboratory Technician II

Ms. Upendo Ezekiel Minja, Bachelor (NTA 8) in Water Resources and Irrigation Engineering (WI), Ordinary Diploma (NTA 6) in Irrigation Engineering (WI)

Soil Laboratory Technician II

Mr. Ally Abdallah Ally, Bachelor (NTA 8) in Water Resources and Irrigation Engineering (WI), Ordinary Diploma (NTA 6) in Irrigation Engineering (WI).

Plumbing Workshop Technician I

Ms. Happy O. Mgondo: Diploma in Water Supply and Sanitation Engineering (WI).

7.2.5 List of Academic Staff in the Department of Water Resources Management

Assistant Lecturer and Head of Department

*** ***George John Ishabairu,*** MSc. in Structural Geology (UDSM) and BSc. in Geology (UDSM).

Lecturer

Dr. William Senkondo: Ph.D in Physical Geography (Stockholm University Sweden), MSc. in Water Science and Engineering (UNESCO-IHE Netherlands and BSc. in Civil and Water Resources Engineering (UDSM).

Lecturer

Dr. Edmund Ishengoma Mutayoba, PhD in Water Resources Management (SUA), MSc. In Integrated Water Resources Management (UDSM) BSc. In Environment Sciences (SUA)

Lecturer

Dr. Magori Jackson Nyangi, BED in Science (UDSM), MSc. in Chemistry (UDSM), PhD in Water Management Specialized in Water Science and Technology (Addis Ababa University – Ethiopia)

Lecturer

Eng. Dr. Eunice Jesto Makungu, PhD (Hydrology) (Rhodes University SA), Msc. in Water Resources Engineering (UDSM), Bsc. In Civil and Water Resources Engineering (UDSM), Professional Engineer (P.E).

Assistant Lecturer

Mr. Paulo Martin Sanka: MSc. in Hydrology & Water Resources Engineering (NM-AIST), BSc. in Environmental Laboratory Science & Technology (ARU) and Diploma in Water Quality Laboratory Technology (WI-Dar es Salaam).

Assistant Lecturer

****Catherine Joyce Salim***, MSc. in Environmental Engineering (CUG–Wuhan PRC-China), BA in Geography and Environmental Studies (UDSM).

Assistant Lecturer

Eng. Stephano M. Alphayo: MSc. Tech. in Environmental Management of Rivers and Lakes (IIT–Roorkee, India), R. Engineer (T) and BSc. in Environmental Engineering (ARU-Tanzania).

Assistant Lecturer

***Dr. Ghanima Hamisi Chanzi,* Ag. Head of Unit:** PhD in Environmental Science (OUT–Tanzania), MSc. in Water Resources Engineering (UDSM) and BSc. in Environmental Laboratory Science Technology (ARU-Tanzania).

Assistant Lecturer

Mr. Mussa Njige Paul, MSc. Biochemistry (SUA), BSc. with Education (NMTC).

Assistant Lecturer

Mr. Musiba Masamba Musiba, MSc. in Hydrology of Water Resources Engineering (NMAIST), PGD in Meteorology (University of Nairobi, Kenya), BSc. in Environmental Science Management (SUA), Technician Certificate in Metoorology (NMTC).

Senior Tutor I

***Dr. Josephine John Gobry:* PhD in Environmental Sciencs (UDSM –Tanzania),**MSc. in Integrated Water Resources Management (UDSM), BSc with Education (UDSM) and Diploma in Education (DTC).

Senior Tutor I

Dr. Mihayo Nkinda Sahani: Ph.D in Environmental Science & Engineering (Nelson Mandela African Institution of Science & Technology) MSc. In Chemistry (UDSM), BSc. General (OUT Tanzania), FTC in Water Resource Engineering (RWI).

Senior Tutor I

****Ms. Zenorina Prosper Anthony,*** BSc. with Education (UDSM), MSc. In Integrated Environmental Management (UDSM).

Senior Tutor I

***** Ms. Grace F. Mvungi,*** BSc. with Education. (UDSM), MEd in Science Education (UDSM) and Diploma in Education (Kleruu TTC).

Tutor I

****Mr. Jackson Nkwama,*** BSc. in Applied Geology (UDOM)

Senior Tutor II

Dr. Clarance Paul Kisiki, PhD in Hydrology and Water Resources Management (Specialization in Hydrogeology)- Addis Ababa University, Ethiopia, MSc. in Integrated Water Resources Management (UDSM), BSc in Geology (UDSM), PGD in Shared Water Resource Management (Cairo Uniyersity, Egypt).

Tutor II

Mr. Godwin Masua Samora, Bachelor of Science in Geology (UDSM)

Senior Instructor II

Ms. Neema Yoram Mwitula: BSc. of Business Administration (Tumaini University), Diploma of Business Administration (Teophilo Kisanji University), FTC in Hydrogeology (WRI), Certificate of Civil Drafting grade I (WRI) Certificate in Teaching Methodologies (VETA).

Laboratory Technician I

****Mr. Emmanuel Efrass Chugu,*** BD in WRIE (WI Dar es Salaam) Diploma in Water Quality Laboratory Technology (WI Dar es Salaam).

Assistant Instructor II

Ms. Zawadi Mohamed Twahil, Ordinary Diploma in Science and Laboratory Technology (DIT)

7.3 PROFILE OF ADMINISTRATIVE STAFF

7.3.1 MANAGEMENT

Chief Executive Officer

Dr. Adam O. Karia: PgD in Leadership at Uongozi Institute Technician (Dar es Salaam), PhD in Business Administration (Kisii University – Kenya), MSc in IT & Management PgD in IT and Management (India), Advanced Diploma in IT (UK), Diploma in Water Supply Management (Germany), Diploma in Technical Education (Kleruu) and Certificate in Civil Engineering (Misungwi).

Deputy Rector – ARC

Dr. Tulinave B. Mwamila (Eng.); PhD in Civil and Environmental Engineering, (Seoul National University, South Korea) and MSc. In Water Resources Engineering (UDSM) and BSc. in Civil & Water Resources Engineering (UDSM).

Deputy Rector - PFA

Dr. William Senkondo (Eng.); PhD in Physical Geography (Stockholm University–Sweden), MSc. in Water Science and Engineering (UNESCO-IHE Netherlands and BSc. in Civil and Water Resources Engineering (UDSM).

7.3.2 HUMAN RESOURCE MANAGEMENT AND ADMINISTRATION UNIT

Manager Human Resource Management and Administration

***Mr. Felix Elliah Staki*:** Master of Human Resource Management (OUT-Tanzania), BA Public Admnistration (Mohanlal Sukhadia University, India), PGD in Human Resource Management (CBE) and PHR Certificate (TPSC–Tanzania).

Principal Human Resources Officer I

Ms. Esteria Gissawa Mrigo, MSc. in Human Resource Management (MU Morogoro), BD of Arts (UDSM-Tanzania) and PHR Certificate (TPSC–Tanzania).

Human Resources Officer I

Mr. Frank A. Ndelemba, MSc. in Human Resource Management (IAA–Tanzania), BD of Public Administration in Human Resource Management (MU Morogoro) and PHR Certificate (TPSC–Tanzania).

Senior Administrative Officer

Ms. Rebecca Elias Kajiru, BD of Arts(OUT-Tanzania), Quality Law (Administration) (TPSC Tanzania).

Human Resources Officer II

Mr. David Festo Ndumbaro, BD in Human Resource Management (Tumaini University Dar es Salaam College).

Administrative Officer II

Mr. Daudi S. Lukoa, BD in Human Resource Planning and Management (IRDP–Tanzania)

Records Management Assistant I

Ms. Felista P. Kiungo, Diploma in Records Management (TPSC - Tanzania), ***B***asic Certificate in Records Management (TPSC - Tanzania) and Certificate in Records Management (TPSC - Tanzania),

Senior Records Management Assistant I

Mwanaidi John Bibangamba: Ordinary Diploma in Records & Archives Management (TPSC – Tanzania), Basic Certificate in Records Management (TPSC – Tanzania), Certificate in Records (TPSC – Tanzania).

Records Management Assistant II

Mr. Robert B. Bunto, Ordinary Diploma in Record Management (TPSC – Tanzania), Certificate Basic Techncian in Records Management (TPSC – Tanzania),

Driver II

Edward Lugaila Abdon, Advanced Driving, National Institute of Transport (NIT), Certifacate of Professional Competence National Institute of Transport (NIT), Certificate of Basic Driving Course - Vocational Education and Training Authority (VETA),

Driver II

Edward Romanus Nachinguru, Certificate Red Cross Congolese/Rundian Refugees Relief Operation Driver,

Driver II

Winfred Francis Ntanga: Advanced Driving Certificate Grade II National Institute of Transport (NIT), Basic Certificate in Driving - Vocational Educational Training Authority, Advanced Driving Certificate Grade Two

Driver II

Mr. Kelvin Gerald Ibrahim, Advanced Driving,National Institute of Transport II (VIP) Certifacate of Professional Competence National Institute of Transport (NIT), Certificate of Basic Driving Courrse (Vocational Education and Training Authority-VETA), Certificate in comotor Vehicle Mechanics (St. Anthony Vocational Training Centre).

Driver II

Mr. Simon Nkwabi Sangija, Driving Certificate Grade II (Vocational Educational Training Authority)

Driver II

Mr. Zacharia Godwin Mshana, Certifacate of Professional Competence (National Institute of Transport - NIT), Certificate of Basic Driving Course (Vocational Education and Training Authority - VETA).

Driver II

Mr. Mbaraka Hamisi Mbano, Advanced Driving, National Institute of Transport II (VIP), Certifacate of Professional Competence (National Institute of Transport - NIT), Certificate of Basic Driving Courrse (Vocational Education and Training Authority-VETA), Certificate in completed a course of instruction in Microcomputer Applications (University of Dar es Salaam Computing Centre).

Principal Office Attendant

Ms. Grace Lazaro, Certificate in Office Management Services (TIA Dar es Salaam).

Estate Officer II

Mr. Elias Stephen Masanga, BSc. in Civil Engineering (UDSM).

Electrical Technician II

Mr. Ernest Sebastian Maneno, Diploma in Electrical and Electronic Engineering (Mbeya University of Science and Technology).

7.3.3 LEGAL SERVICES UNIT

Principal Legal officer and Head of Unit

Head of Unit: ***Adv. Adelina Rogath Massae:*** Master of Law (LLM) in General Law (KIU-Tanzania), Postgraduate Diploma in Legal Practice (The Law School of Tanzania), Bachelor of Laws (LLB) (KIU-Uganda).

Legal Officer I

Adv. Godfrey Ernest Kituli, Postgraduate Diploma in Legal Practice (The Law School of Tanzania), Bachelor of Laws (LLB) (Tumaini University Dar es Salaam College).

Legal Officer II

Adv. Chali Erasto Erasto, Postgraduate Diploma in Legal Practice (Law School of TZ), Bachelor of Laws (Mzumbe University), Diploma in Law (Mzumbe University), Certificate in Law (Institute og Judicial Administration Lushoto)

7.3.4 INTERNAL AUDIT UNIT

Senior Internal Auditor Officer and Ag. Head of Unit

Ag. Head of Unit: ***CPA (T) Japhet Simon Mtigile:*** CPA (T) - NBAA Tanzania and Bachelor Degree in Business Accounting and Finance (MU Tanzania).

7.3.5 PROCUREMENT MANAGEMENT UNIT

Senior Procurement Officer and Head of Unit

Dr. Christoper Peter Nditi, PhD in Applied Management and Decision Sciences (Information System Management)–(Walden University–USA) CPSP–(PSPTB – Tanzania), Master of Information Systems Management (Keller Graduate School of Management), Master of Networks and Communications Management (Keller Graduate School of Management), (PSPTB Tanzania), BA-Procurement and Logistics Management (MU-Morogoro) and Diploma in Accountancy (CBE Tanzania).

Supplies Officer I

Mr. Rodney Ndaro Matage,

Bachelor in Procurement and Supply Management, College of Business Educ. 2014, Postgraduate Diploma in Procurement and Logistics Management, TIA - 2015, Certificate Procurement and Supplied Professionals and Technicians Boards (PSPTB) 2014, Diploma in Clearing and Freight Forwarding NIT - 2006

Supplies Officer II

Mr. Kulwa Matuhunha Jonas, Bachelor of Procurement and Supplies Management (CBE), Certificate of Registration as Graduate Procurement and Supplies Professional (PSPTB), Diploma of Procurement and Supply Management (Eckenforde Tanga University), Certificate of Procurement and Supply Management

Supplies Officer II

Ms. Neema Gibson Minja, Bachelor in Procurement & Logistics Management (Tanzania Institute of Accountancy - TIA), Diploma in Procurement & Logistics Management (Tanzania Institute of Accountancy - TIA)

7.3.6 DEAN OF STUDENTS OFFICE

Lecturer and Dean of Student

Ms. Grace F. Mvungi, BSc. with Education. (UDSM), MEd in Science Education (UDSM) and Diploma in Education (Kleruu TTC).

Medical Officer I

***Mr. Owden Mwansyange Mwamafupa,** BSc. in Medicine (IMTU Tanzania), Diploma in Clinical Medicine (MTC – Kibaha).

Nurse II

***Mr. Joseph Aloyce Marini,** Certificate of Nurses amd Midwives (Kibosho School of Nursing).

Warden II

***Mr. Amos Julius Ryoba,** BAs. With Eduaction (Tumaini University Makumira), Ordinary Diploma of Food Beverage Services and Sales (VETA Hotel and Tourism Training Institute), Certificate of Tour Guiding (VETA Hotel and Tourism Training Institute).

Warden II

***Ms. Judith Charles Komba,** Bachelor of Education in Psychology (University of Dar es Salaam).

Warden II

***Ms. Anna Cypriany Kanyali,** Bachelor of Degree of Arts with Education - Stella Maris Mtwara University College (STEMMUCO)

Games and Sports Development Officer II

***Mr. Twaha Mshamu Nassor,** Bachelor of Education in Physical Education and Sports Sciences (UDSM)

Games and Sports Development Officer II

***Ms. Yaishe Richard Komba,** Bachelor of Education in Physical Education and Sports Sciences (UDSM)

7.3.7 ACCOUNTS AND FINANCE UNIT

Chief Accountant and Head of Department

***Ms. Regina Vicent Sekao,** MBA in Corporate Management (MU Morogoro), BA in Accounting and Finance (MUCCOBS Kilimanjaro) and Diploma in Cooperative and Management Accounting (MUCCOBS Kilimanjaro).

Principal Accountant II

CPA. Prisca Justus Bussa, Certificate in Public Accountant (CPA (T)) NBAA, Postgraduate Diploma in Accounting (Institute of Finance Management Dar es Saalm), Diploma in International Public Sector AS.S. ccounting Standards (IPSAS).

Senior Accountant

Ms Halima Abdallah Mghana, MSc. of Business Administration (MU Morogoro), BSc. of Commerce in Accounting (UDSM),) Diploma in Business Administration (CBE Tanzania) PgD Accountancy (IAA Tanzania).

Accountant II

CPA. Happy Godfrey Msangi, Certified Public Accountant (CPA – NBAA 2021), BA. in Accounting and Finance (Moshi Co-Operative University).

Assistant Accountant I

Mr. Saidi Ibrahim Mohamed, Diploma in Accountancy (TIA Tanzania - 2016).

7.3.8 PLANNING MONITORING AND EVALUATION DEPARTMENT

Senior Planning Officer and Head of Department

Mr. Ibrahim Ahabu Wikedzi, MSc. in Agricultural Economics (SUA Morogoro) and BSc. in Agronomy (SUA Morogoro).

Planning Officer II

Mr. Ray Isaya Mapunda, BD in Reginal Development Planning (Institute of Rural Development Planning - IRDP).

7.3.9 ICT AND STATISTICS DEPARTMENT

Principal Information Communication Technology Officer I

Mr. Dickson Mwanyika: MSc in Computer Application Technology (Central South University-China), PgD in Computer Application Systems (Central South University-China), Bachelor of Library and Information Studies (Makerere University), Diploma in Information Systems (Dublin University).

Computer Operator Grade I

Ms. Epiphania P. Lyakurwa, Diploma in Computer Science with Maintenance (INTEL Training Centre).

ICT Officer II

Mr. Abdul Habibu Kassimu, Bachelor in Informatiojn Technology (National Institute of Transports – NIT)

7.3.10 LIBRARY AND DOCUMENTATION SERVICES DEPARTMENT

Assistant Lecturer II and Head of Department

Mr. James Mhoja Dosa, MSc. of Information Studies (UDSM), BSc. In Library and Information Management (MU Morogoro) and Diploma in Library Archives and Documentation Studies (School of Library and Archives Documentations - SLADS).

Senior Librarian Assistant II

Mr. Oscar S. Nsemwa, Diploma in Library, Archives and Documentation Studies (School of Library and Archives Documentations - SLADS)

Librarian II

Mr. Edward John Damian, BAs. In Library and Documentation Studies (UDSM).

Librarian II

Ms. Lucy Shughuli Nzunda, Bachelor of Information and Records Management (Sokoine University of Agriculture).

Librarian II

Ms. Magreth Pius Musiba, Bachelor of Science in Library and Information Management (Mzumbe University).

Librarian II

Ms. Maria Hugolin Haule, BSc. In Library and Information Management (Mzumbe University), Diploma in Library and Archival Studies (Moshi Co-operatative University), Certificate in Library and Information Science – (Sokoine University of Agriculture).

Librarian II

Ms. Aivonancy Elia Materu, BAs. In Library and Information Management (Tumaini University).

Assistant Librarian II

Ms. Theresia Andrew Gwido, Diploma in Library, Records and Information Studies (School of Library, Archives and Documentation Studies – SLADS), Certificate in Library, Records and Information (School of Library, Archives and Documentation Studies – SLADS).

Admission Officer II

Mr. Cuthbert Fresco Kapinga, Bachelor of Science with Education (UDSM)

Key

*** Implies On study for Ph.D
** Implies On study for Masters
* Implies On study for First Degree

CHAPTER EIGHT

8.0 ACADEMIC CALENDAR FOR ACADEMIC YEAR 2024/2025

8.1 FULL TIME ACADEMIC PROGRAMMES

Implementation of all programs shall be in accordance with the following schedule of activities/events:

S/N	Activity/Event	Start	Finish
1.	Management Meeting	October 2, 2024	October 2, 2024
2.	SHIMIWI	October 7, 2024	October 18, 2024
3.	Departmental Meeting	October 11, 2024	October 11, 2024
4.	Semester 1 OY 2024/2025- Registration & Orientation – (NTA4, 7 – 1)	October 14, 2024	October 18, 2024
5.	Academic & Administration Staff Meetings	October 15, 2024	October 15, 2024
6.	IPT report presentations	October 16, 2024	October 18, 2024
7.	Semester 1 OY 2024/2025- Lessons (NTA 4 – 8)	October 21, 2024	February 14, 2024
8.	Project Concept Note Presentation (NTA6&8)	October 21, 2024	October 25, 2024
9.	General Staff Meeting	October 23, 2024	October 23, 2024
10.	Writing project proposal (NTA6 and 8)	October 28, 2024	November 29, 2024
11.	MAB committee meeting	October 28, 2024	October 28, 2024
12.	MAB committee meeting	October 29, 2024	October 29, 2024
13.	Proposal approved by the Supervisor Submission (NTA 9-2)	October 28, 2024	October 31, 2024
14.	MAB-Meeting	November 4, 2024	November 4, 2024
15.	48th Graduation Ceremonies	November 13, 2024	November 13, 2024
16.	Semester 1 OY 2024/2025- Lessons Registration & Orientation (NTA 9-1)	November 18, 2024	November 22, 2025
17.	Semester 1 OY 2024/2025- Lessons (NTA 9-1)	November 25, 2024	March 21, 2025
18.	Semester 1 – Test 1 (NTA 4 -8)	November 25, 2024	November 29, 2024
19.	Project proposal Presentation (NTA6&8)	December 2, 2024	December 6, 2024

S/N	Activity/Event	Start	Finish
20.	Progress Report Presentation (NTA Level 9-2)	December 2, 2024	December 3, 2024
21.	Data Analysis, Publication and Final Report Preparation (NTA Level 9-2)	December 4, 2024	March 31, 2025
22.	SHIMIVUTA	December 8, 2024	December 20, 2024
23.	Disciplinary Committee	December 17, 2024	December 17, 2024
24.	Worker's Council	December 19, 2024	December 20, 2024
25.	New Year Holiday Vacation	December 23, 2024	January 3, 2025
26.	Concept Note Submission (NTA 9_2)	January 3, 2025	January 3, 2025
27.	Semester 1 – Test II (NTA 4 -9-1)	January 6, 2025	January 10, 2025
28.	Concept Note Presentation (NTA 9_2)	January 13, 2025	January 13, 2025
29.	Recruitment Committee	January 13, 2025	January 17, 2025
30.	Management Meeting	January 15, 2025	January 15, 2025
31.	Budget Preparation	January 20, 2025	January 24, 2025
32.	Project proposal Presentation (NTA6&8)	January 20, 2025	January 24, 2025
33.	Proposal Submission (NTA 9_2)	January 27, 2025	January 27, 2025
34.	International Maji Scientific Conference	January 29, 2025	January 31, 2025
35.	End of Semester 1 Examinations (NTA 4 -8)	February 3, 2025	February 14, 2025
36.	MAB committee meeting	February 6, 2025	February 6, 2025
37.	Proposal Presentation (NTA 9_2)	February 7, 2025	February 7, 2025
38.	Data Collection (NTA 9_2)	February 10, 2025	March 2, 2025
39.	MAB meeting	February 13, 2025	February 13, 2025
40.	NTA4-8 Semester 1 Vacation	February 17, 2025	March 10, 2025
41.	End of Semester 1 Exam – Marking (NTA 4 -8)	February 17, 2025	February 28, 2025
42.	Progress Report Presentation (NTA 9-2)	February 28, 2025	February 28, 2025
43.	Submitting project final proposal (NTA8)	February 17, 2025	February 21, 2025
44.	First Progress Report Presentation (NTA 9-2)	March 3, 2025	March 3, 2025
45.	Data Analysis, Manuscript Preparation and Submission (NTA 9-2)	March 4, 2025	April 13, 2025
46.	Disciplinary Committee	March 6, 2025	March 6, 2025

S/N	Activity/Event	Start	Finish
47.	End of Semester 1 Examinations (NTA 9)	March 10, 2025	March 14, 2025
48.	Semester 2 - OY 2025/2025 Lessons (NTA 4 - 8)	March 10, 2025	July 4, 2025
49.	Semester 2 - OY 2025/2025 Lessons (NTA 9)	March 17, 2025	July 10, 2025
50.	HIV/AIDS and Corruption Training	March 12, 2025	March 13, 2025
51.	End of Semester 1 Marking (NTA 9)	March 17, 2025	March 19, 2025
52.	Departmental Meeting	March 18, 2025	March 18, 2025
53.	Academic Affairs Board Meeting	March 21, 2025	March 21, 2025
54.	Writing Project Report (NTA6&8)	March 10, 2025	April 1, 2025
55.	Departmental Meeting	April 2, 2025	April 2, 2025
56.	Internal and External Examiners Review of Master's Dissertation	April 2, 2025	April 30, 2025
57.	Mini-presentation of project results_1 (NTA6&8)	April 2, 2025	April 4, 2025
58.	Academic Affairs Board Meeting	April 3, 2025	April 3, 2025
59.	Management Meeting	April 4, 2025	April 4, 2025
60.	Staff Meeting	April 9, 2025	April 9, 2025
61.	Semester 2 – Test I (NTA 4 -8)	April 8, 2025	April 11, 2025
62.	Second Progress Report Submission (NTA 9_2)	April 18, 2025	April 18, 2025
63.	Recruitment Committee Meeting	April 22, 2025	April 25, 2025
64.	Second Progress Report Presentation (NTA 9_2)	April 25, 2025	April 25, 2025
65.	Dissertation Report Writing	April 28, 2025	May 29, 2025
66.	MAB committee meeting	April 30, 2025	April 30, 2025
67.	Semester 2 – Test II (NTA 4 -9)	May 5, 2025	May 9, 2025
68.	MAB-Meeting	May 7, 2025	May 7, 2025
69.	Internal final presentation of project reports (NTA 6& 8)	May 19, 2025	May 30, 2025
70.	Third (Final) Progress Report Submission (NTA 9_2)	May 29, 2025	May 29, 2025
71.	Final Progress Report Presentation and Publication acceptance status (NTA 9_2)	May 30, 2025	May 30, 2025
72.	Compilation of Dissertation Report (NTA 9_2)	June 1, 2025	June 15, 2025

S/N	Activity/Event	Start	Finish
73.	Carry out corrections, and loosely bound Submitting of the project books (NTA 6&8)	June 2, 2025	June 6, 2025
74.	Disciplinary Committee	June 5, 2025	June 5, 2025
75.	External presentation of project reports (NTA 6&8)	June 9, 2025	June 13, 2025
76.	Final Dissertation Report Submission	June 15, 2025	June 15, 2025
77.	Submission of loose bound final dissertation report for internal and external review (NTA 9_2)	June 16, 2025	June 16, 2025
78.	End of Semester 2 Exam (NTA 4 -8)	June 23, 2025	July 4, 2025
79.	End of Semester 2 Exam (NTA 9)	June 30, 2025	July 10, 2025
80.	Management Meeting	July 2, 2025	July 2, 2025
81.	MAB committee meeting	July 3, 2025	July 3, 2025
82.	Semester 2 vacation	July 7, 2025	August 25, 2025
83.	End of Semester 2 Exam – Marking	July 7, 2025	July 25, 2025
84.	MAB Meeting	July 10, 2025	July 10, 2025
85.	NTA 9 Proposal Writing	July 14, 2025	August 29, 2025
86.	Carry out corrections, Binding and Submitting project books (NTA 6&8)	July 17, 2025	August 1, 2025
87.	Final Dissertation Defence (NTA 9_2)	July 23, 2025	July 25, 2025
88.	Departmental Meeting	July 28, 2025	July 28, 2025
89.	Submission of revised Dissertation book to Committee (NTA 9_2)	July 30, 2025	July 30, 2025
90.	Submission of Final Hard Cover Dissertation Book (NTA 9_2)	July 31, 2025	July 31, 2025
91.	Academic Affairs Board Meeting	July 31, 2025	July 31, 2025
92.	Semester 1& 2 Supp/Special Exam (NTA 4 – 9)	August 4, 2025	August 7, 2025
93.	Industrial/Field Practical Training	August 11, 2025	October 10, 2025
94.	Semester 2 Supp/Special Marking	August 11, 2025	August 22, 2025
95.	Departmental Meeting	August 27, 2025	August 27, 2025
96.	Academic Affairs Board Meeting	August 29, 2025	August 29, 2025
97.	Proposal Writing (NTA 9)	August 18, 2025	October 24, 2025
98.	Proposal Approved by Supervisor Submission (NTA 9)	September 1, 2025	September 5, 2025

S/N	Activity/Event	Start	Finish
99.	Proposal Defence (NTA 9)	September 8, 2025	September 11, 2025
100.	Worker's Council	September 11, 2025	September 12, 2025
101.	MAB committee meeting	September 25, 2025	September 25, 2025
102.	Final Proposal Submission NTA 9	October 1, 2025	October 3, 2025
103.	MAB Meeting	October 2, 2025	October 2, 2025
104.	Data Collection NTA 9	October 6, 2025	November 28, 2025
105.	Semester 1 OY 2025/ 2026- Registration & Orientation - NTA4, 7 – 1 and NTA 9-1	October 13, 2025	October 24, 2025
106.	IPT Oral Presentations	October 13, 2025	October 17, 2025
107.	Semester 1 OY 2025/2026- Lessons	October 20, 2025	
108.	49th Graduation	October 30, 2025	October 30, 2025

Amendment

This Prospectus can be reviewed or amended from time to time as deemed necessary and approved by the Water Institute Management.

For reasons to be recorded in writing, the Institute may amend any item of these Regulations from time to time. Provided that, where the intended amendment is on imposing new fee, increase of tution fee or punishment such amendments shall be recommended to MAB.