

# Belal A. Abdellatif, B.Sc.

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## Teaching Assistant & Infrastructure Design Specialist

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### CAREER OBJECTIVE & PERSONAL SUMMARY

- Highly motivated and reliable Infrastructure Engineer with over five years of experience in planning, designing, and analyzing reliable and modern **infrastructure systems** and **sustainable water management solutions** with a strong background in **hydrologic** and **hydraulic modeling tools**, **flood management strategies** and **water quality** in Egypt and the MENA Region.
- Involved in several international projects that require field knowledge of **flood management**, **water resources management**, **water conveyance systems**, **open channel sections** and **natural water bodies**. Had quite experience and Knowledge of **Stormwater collection systems**.
- Extensive experience in the **evaluation of wastewater treatment plants** in Egypt and MENA region.
- Leveraged analytical expertise to identify and solve complex infrastructure challenges, optimizing project outcomes.
- Currently pursuing a Master of Science in Civil & Environmental Engineering, aspiring to increase my knowledge in the area of computational **fluid dynamics modeling** and **sediment transport**.
- Experienced **Teaching Assistant** with four years of experience and a strong track record in mentoring and guiding students in various environmental engineering subjects. Demonstrated ability to handle **complex projects** and **deliver impactful results** in international contexts.
- Estimating the likelihood and consequences of **hazardous events** and quantitatively expressing the results to impacted environments.

### EDUCATION

- Master of Science (**MS**) in Civil & Environmental Engineering, Alexandria University, Egypt (Registered) (2023)
- Bachelor of Science (**B.Sc.**) in Civil & Environmental Engineering, Alexandria University, Egypt **GPA: 3.84/4.00 (2019)**
- International English Language Testing System (**IELTS**) **Band Score = 7**

### TECHNICAL SKILLS & EXPERTISE

#### Data processing, Visualization & Analytics

- Advanced proficiency in Programming languages & Mathematical packages (**MATLAB**, **Python**, **Fortran**, **SPSS**)
- Advanced proficiency in Quantitative Risk Assessment using (**ALPHA**, **Marplot**, **Cameo**, **DNV Safety**)
- Advanced proficiency using (**MS Office**, **MS Excel**, **StormCAD**, **WaterCAD**, **ArcGIS**)

#### Hydrology and Hydraulic Analysis and Modeling

- Intermediate proficiency using **Civil 3D**, **WaterCAD**

#### CAD Design, Meshing & Remote Sensing

- Advanced proficiency using **AutoCAD**, **Civil 3D**
- Advanced proficiency using **ArcGIS Pro**

#### Water and Wastewater Design and Analysis

- Advanced proficiency in networks design and analysis using **WaterGEMS**, **SewerGEMS**
- Intermediate proficiency using **GPS-X**

### PROFESSIONAL EXPERIENCE

**Albert Speer & Partner GmbH, International Integrated Urban Planning Company – Senior Environmental and Infrastructure Engineer;** Frankfurt, Germany **May 2022 – present**

#### Experience and Projects

- Planned, designed, and supervised infrastructure civil works, acquiring practical knowledge in infrastructure utilities.
- Responded effectively and speedily to any problems facing the **infrastructure** field in any project and **provided** engineering solutions.
- Implemented and supervised several **flood management strategies** including **water spills**, **soil seepage**, **river mechanics** and **flood protection mitigation** measures regarding different cities structure plan.
- Adept at utilizing advanced modeling tools to implement effective environmental assessments, such as: **Environmental Impact Assessment (EIA)**, **Quantitative Risk Assessment (QRA)**, **Strategic Environmental Assessment (SEA)**, **Collecting and analyzing environmental data**, **Risk Management Plan (RMP)** and **Risk Assessment System (RAS)**.
- Exposed to several cross-cutting subjects: Resilience and climate change, Water resource management.
- Dealing with Environmental Management Indicators and achieving sustainable development goals in most of my projects.
- Participated in several international conferences held on **Frankfurt, Germany, Alexandria, Cairo, Egypt**, and **Oman**.
- Contributed to international projects with significant impact with high Capex such as:
  - **Badya City**, **6th October City**, Cairo, Egypt.
  - **GCAP “Green City Action Plan”** Alexandria, Egypt
  - **Maleeha Street Flooding Strategy**, Sharjah, United Arab Emirates
  - **GNSP “Greater Nizwa Structure Plan”** Nizwa, Oman
  - **GBC “Grand Blue City”** Muscat, Oman
  - Building new transmission system for **“NEOM City”**, Kingdom of Saudi Arabia

**GRID International Integrated Consultant Company – Senior Infrastructure Engineer; Alexandria, Egypt**

*Jan 2022 – present*

- Assisted with many strategic planning projects in the [water and sanitation sector](#).
- Conduct hydrological studies to assess [water availability](#), [flow patterns](#), [quality](#), [transmission](#), and [potential flood risks](#) in each area.
- Developed 2D and 3D drawings for [infrastructure systems](#) and designed [flood control systems](#) to minimize flood damage.
- Design [flood control systems](#), including [levees](#), [dams](#), and [stormwater management infrastructure](#), to minimize flood damage.
- Develop [sustainable water supply systems](#), ensuring a reliable and safe water source for local communities in Alexandria.
- Assess the [environmental impact of water resource projects](#) and propose mitigation measures.
- Worked on [sustainability initiatives](#), such as energy efficiency improvements, renewable energy projects, and green building design.
- Design and implement [waste management systems](#), including [recycling programs](#) and [hazardous waste disposal](#).
- Worked and participated on [several infrastructure](#) and [environmental projects](#) on different levels:
  - Infrastructure Strategic Plan, design, and supervision - *6<sup>th</sup> of October* Badya Project, Egypt
  - Urgent Actions for Storm Water Collection System - Alexandria Governorate
  - Strategic Master plan for the urban Development of GBC 2032 -Master Plan *Garden Blue City, Oman*
  - Design of industrial wastewater treatment plan - Yemeni Company for Soap and Ghee Manufacturing, Yemen
  - Main Consultant of civil works and environmental studies – *El-Lahoun* Irrigation Project, Fayoum, Egypt
  - Preparation of QRA Study for development of oil transmission line - *APRC* Oil Transmission pipeline, Alexandria, Egypt

**Alexandria University – Graduate Research & Teaching Assistant; Alexandria, Egypt**

*March 2021 – Present*

- Teaching Assistant for Sanitary Engineering; Environmental Sciences; Soil Mechanics; Civil Engineering Drawing; Water Infrastructures & Pipelines Design; Environmental Engineering (water & wastewater processes design & modeling); and Advanced Wastewater Treatment Processes.
- Guided undergraduates on their [lab work](#) and [capstone projects](#) on designing water treatment plants, wastewater treatment plants, and drinking water distribution networks design and optimization.
- Prepared and taught [illustrative sessions](#), prepared [course assignments](#), and [solutions](#), and [graded the assignments](#).
- Supported in calculations and cost estimation of a [solid waste management plant](#) in Alexandria, Egypt.

**TESECO Local Consultant Company – Junior Infrastructure Engineer; Alexandria, Egypt**

*Feb 2021 – Nov 2021*

- Planned, designed, and executed [wastewater treatment plants](#) including treatment units, [potable water conveyance systems and storage units](#), [wastewater collection systems](#), [intakes](#) connected to [Nile River](#).
- Value Engineering and enhancement of different [treatment plants in industrial](#) locations.
- Participated in several local projects within Alexandria city boundaries:
  - Preparation of detailed design of infrastructure works: (water & wastewater utilities) - *Swari City*, Alexandria. Infrastructure Utilities
  - Planning and Designing of Collection Network for (sewage and Storm water), *Palm Hills* Alexandria, Egypt
  - Planning and Designing of Infrastructure Networks in *Daba'a* Nuclear Station (Sewage, Water supply, Storm Water, etc.)
  - Contractor Consultant, Design of electromechanical works (*Bestenway - Rezkaa* WWTP's) - "*Hyah Karema*" initiative, Egyptian Armed Forces, Engineering Sector, Egypt.
  - Value Engineering for infrastructure networks and treatment plant - Egypt integration project *6th of October* industrial zone, Giza, Egypt supervised by Schlumberger.

**Egyptian Armed Forces (Engineering Division) – Design Lead & Project Coordinator; Alexandria, Egypt**

*Oct 2019 – Dec 2020*

- Prepared waterline relocation and stormwater pollution prevention plans sheets for the City of Alexandria approval and utility coordination to address all the possible conflicts
- Participated in the planning and design of lining multiple open channels including scouring and sediment transport analysis.

**City of Alexandria Governor's Office – Undergraduate Consultant; Alexandria, Egypt**

*2016 – 2018*

- Designed and planned [water distribution networks](#), [pipeline systems](#), and [lift stations](#).
- Contributed to the design and construction of a small [industrial wastewater treatment plant](#).

**SELECTED GRADUATE & UNDERGRADUATE COURSEWORK**

[Chemical Principles for Environmental Engineering](#); [Physical Principles of Environmental Engineering](#); Applied Biology for Engineers; Microbiology for Engineers; [Physical-Chemical Processes for Water Quality](#); Sanitary Engineering; [Biological Processes for Water Quality Control](#); [Advanced Wastewater Treatment](#); Water Reuse; [Fluid Mechanics I & II](#); Hydrology; Groundwater & Contaminant Transportation; Soil Seepage & Groundwater Movement; Geotechnical Analysis I & II; Surveying I & II; Environmental Instrumentations.

**HONORS & AWARDS**

- Received several awards and certificates during my study period in college.
- Top of my class in hydraulics courses (Prof. *Mounir Kansoh* Award) 2017-2018.