

# **CALL FOR APPLICATIONS**

## **Civil Engineering M.Sc. Program**

### **WATER RESOURCES ENGINEERING AND MANAGEMENT**

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#### **Key Facts:**

- Organizer: “**Regional Institute for Water Education for West and Central Asia**” (**RIWE**) in collaboration with:
  - School of Civil Engineering, College of Engineering, University of Tehran
  - UNESCO Tehran Cluster Office, Tehran, Iran,
  - Ministry of Energy, Islamic Republic of Iran
  - IHE-Delft University (formerly known as UNESCO-IHE), the Netherlands
- Program intensity: Full-time (2 to 3 years)
- Start date: September 22, 2018
- Credits: 32 credits
- Languages: English
- Delivery mode: On Campus
- **Application deadline: August 10, 2018**
- Campus location: Tehran, IRAN

#### **About the program and University of Tehran**

Many regions of the world are increasingly facing challenges when it comes to managing water. The nature of these challenges differs from one location to the next. It may relate to having too little water while water demands are growing (water scarcity), too much water (flooding), and water of poor quality rendering it unfit to sustain aquatic ecosystems and/or containing the provision of water to people, industry and agriculture. Addressing these challenges requires that water managers apply an integrated and interdisciplinary approach, taking into account hydrological, biophysical, chemical, social, economic, institutional, legal, policymaking and planning aspects. The **Water Resources Engineering and Management** program provide such an integrated and interdisciplinary approach. Throughout the program, students are encouraged to study water resources management from a multidisciplinary perspective and to seek integrated solutions for problems selected from real case studies.

The program is designed to improve the skills of engineers to develop, implement and critically evaluate water management policies and strategies in order to foster inclusive and sustainable use of water and achieve effective governance of water systems. Students learn to take into account variations in social and environmental constraints and resources in formulating water resources management strategies. The program benefits from integrated and holistic theoretical framework enhanced by several experience-based and case-based instructional methods such as games, which bring together real-life situations and game conditions (players, rules, competition, conflict, etc.) and activates students in the learning process. Students of these programs enjoy interacting with lecturers having various educational backgrounds in the fields of civil engineering, environmental engineering, irrigation engineering, chemical engineering, economics, and social sciences.

University of Tehran, which hosts RIWE has been **ranked 15<sup>th</sup>** in the “Water Resources” subject in the 2017 Shanghai Ranking of Academic Subjects. University of Tehran, therefore, as the only university in the Middle East region with such a high ranking in “water resources” and as the biggest and oldest university in Iran is the best possible host for RIWE in the region. Further information about RIWE can be found in [riwe.ut.ac.ir](http://riwe.ut.ac.ir).

### Program structure

The M.Sc. program in Water Resources Engineering and Management starts with a foundation phase, in which students are familiarized with engineering skills needed for modeling of water resources systems. In this phase, students should successfully pass the required courses. In the second phase, students can select four elective courses from the list of elective courses categorized in two “**WATER RESOURCES MANAGEMENT**” and “**URBAN WATER MANAGEMENT**” clusters as shown in the following table.

Required Courses	Elective Courses (Water Management Cluster)	Elective Courses (Urban Water Management Cluster)
Water Resources Systems Analysis	Water Governance	Advanced Water and Wastewater Engineering
Advanced Hydrology	Water Economics	Design of Water and Wastewater Networks
Advanced Groundwater	Institutional Analysis	Principals of Water and Wastewater Treatment
RS and GIS Application in Civil Engineering	Hydro Politics and Diplomacy	Water Desalination
Seminar	Water Laws and Protocols	Design of Water and Wastewater Treatment Plants
	Value Engineering	Sustainable Development and Environmental Management
	Sustainable Development and Environmental Management	Value Engineering
	Meteorology and Climate Change	

Completion of the program can be achieved by conducting M.Sc. research and thesis writing in line with the selected study profile (cluster). Once successfully completed this program, graduates will be able to:

- Describe and predict for a given water resources system, the main hydrological and environmental processes and how these processes are dynamically linked with human activities, including land use and water service provision.
- Critically evaluate technical and nontechnical interventions through analysis of implications for the water system, its users and their interrelations.

They will also learn some of the required skills for a water resources engineer/manager including:

- Good team-work skills
- Problem-solving skills
- IT skills
- GIS and remote sensing skills
- Communication skills

### Program Fees and Living Costs

Tuition fees in US Dollars for international students are calculated based on the following table. The tuition fees do not include living cost, accommodation, and insurance fees. Students may choose to pay the fees in US Dollars or in IR Rials according to SANA conversion rate (<http://www.sanarate.ir>).

Students in Persian Speaking neighboring Countries	Other International Students	The second and subsequent members of a family
USD 1850 Per Semester	USD 2300 Per Semester	USD 1600 per Semesters

Living costs in Tehran starts from around \$400 US a month using private or university accommodation.

### Scholarships

A limited number of partial and full scholarships are available for applicants with excellent academic records. Selection process will be carried out by representatives of the University of Tehran and UNESCO Cluster Office in Tehran.

### Admission Process

To apply for the program, please email the following documents to [riwe@ut.ac.ir](mailto:riwe@ut.ac.ir) no later than **August 10, 2018**. Make sure to mention WREM2018 in the subject of the email. All documents not in English, must be accompanied by certified translations. Those who wish to apply for the scholarship, should clearly mention request for full or partial scholarship in the application email.

- A scanned copy of Bachelor degree transcript, original and translated into English
- A scanned copy of Bachelor degree certificate, original and translated into English
- A scanned copy of High school diploma transcript, original and translated into English
- A scanned copy of The proof of English language proficiency (if available),
- Curriculum Vitae including contact information (phone, mobile, email address, and living address, postal code), nationality, citizenship, educational background and professional experiences, current occupation, address of workplace, skills, publications.
- A scanned copy of applicant's Passport
- A scanned copy of applicant's recent photograph.
- A scanned copy of two recommendation letters, and
- Motivation letter.

The original documents will be needed at the time of registration

For more information please contact, [riwe@ut.ac.ir](mailto:riwe@ut.ac.ir).