

HYDROAID
Water for Development Management Institute

DISTANCE LEARNING PROGRAM

Technical Course on

WASTEWATER TREATMENT

2020 edition

Call for applications

This edition of the distance learning course on “Wastewater Treatment” is realized by Hydroaid in collaboration with Politecnico di Torino, a leading Italian university in the field of environmental resources.



BACKGROUND

Established in Turin in 2001 as an initiative of the Italian Ministry of Foreign Affairs and Public, Financial and Academic Authorities of the Piedmont Region, Hydroaid – Water for Development Management Institute – is a non-profit Association entitled to operate both in Italy and abroad dedicated to pursuing objectives of solidarity, protection and improved governance of water resources through training and capacity development activities.

The mission of Hydroaid is to transfer technical knowledge on sustainable water resources management to managers and technicians from developing and emerging countries by providing them with a free school that operates also as a network connecting professionals in the fields of water and sanitation from all over the world. To say it with the words of a course participant, Hydroaid is “like a large office spread across the world that can activate at any time”.

In its years of activity, Hydroaid has grown a network of over 5 000 former participants – specialized operators, prominent engineers and trained technicians working in more than 80 countries affected by water criticalities. Thanks to its composition, Hydroaid operates as a platform of action with a highly integrated profile and varied approaches for the different levels of governance: urban, regional, national and international. Among the Associated Partners of Hydroaid are the Metropolitan City of Turin, the Municipality of Turin, Piedmont Region, SMAT (the Water Utility of Turin), ATO3 (the local water authority of Turin), Hydrodata (a company providing research, engineering and economic consulting services) and Politecnico di Torino. A number of specialized academic, administrative and technical institutions then collaborate to the training activities promoted by Hydroaid.

To date, the portfolio of Hydroaid includes:

- 4 editions of the Master on Integrated Sanitation Management in Brasilia
- 8 editions of the Training Program on Planning and Management of Water Resources in Turin
- different on-site tailored training in Burkina Faso, Benin and Ethiopia
- as well as a Distance Learning Program with modules on Waste Recycling, Planning for Sustainability, Wastewater Treatment, Management of Urban Solid Waste, Urban Water Supply Systems, Rural Water Supply Systems, Economic Regulation of Water Services, Climate Change, Territorial Governance and Water Governance.

Hydroaid strives to improve the quality and efficiency of the water and sanitation services and to bring a concrete contribution to the promotion of sustainable development processes. This edition of the distance learning course on “Wastewater Treatment” is realized in collaboration with **Politecnico di Torino**, a leading Italian technical university.

DESCRIPTION OF THE COURSE

Beneficiaries

This is a distance learning program accessible through the web platform Moodle and it is addressed to **managers, mid-level decision makers and technicians operating in the fields of wastewater treatment from developing and emerging countries.**

The course is open to a **limited number of 100 participants**. This restriction ensures personalized tutoring and the effective realization of team works during the course.



The goal of the course is to transfer practical and technical knowledge for the design and management of wastewater treatment plants. With this course Hydroaid wishes to offer to the participants updated know how in order to improve the management of their resources and to contribute to raise the quality of their services, with special attention to wastewater treatment.

Fee

The participation to the module is **free of charge** and it is meant as a tool for providing a concrete support in pursuing sustainable development processes.

Schedule

The course will take place from 25th May to 23rd August 2020 (13 weeks, 8 didactic units). Hereafter is an indicative schedule, to be confirmed at the end of selection process. Prior to the start of the didactic activities, admitted participants will also receive a detailed calendar with indication of all deadlines for the submission of their works.

Activity	Date
Submission of applications	20 th April – 12 th May 2020
Selection process	13 th – 20 th May 2020
Communications to admitted candidates	21 st – 24 th May 2020
Familiarization week	25 th – 31 st May 2020
First assignment	27 th May – 7 th June
Didactic Module (8 weeks)	1 st June – 2 nd August 2020
Pause week	29 th June – 5 th July 2020
Final assignment	27 th July – 23 rd August 2020
Conclusion of didactic activities	23 rd August 2020
Evaluation and delivery of Certificates to qualified participants	24 th August– 13 th September 2020

Language

All didactic material will be available only in English. Technical communications and assistance will be held in English too. **For this reason, a good knowledge of English language is a compulsory requirement for the attendance of the program.**

Activities

In addition to the didactic material, the course features a number of activities for evaluating the understanding of the contents and the attendance of the participants. These include:

- **Exercises:** multiple choice quizzes and/or written assignments;
- **Forums:** forum discussions are designed as an extension of the learning program to produce a useful and interactive environment for debating the topics of the course, exchanging information and sharing experiences. An assistance forum and technical guides are also available on the platform to facilitate the use of all the functions;
- **First and final assignment:** at the beginning and towards the end of the course, participants will be assigned specific topics to develop through individual work and research.



Tutoring

Tutors will be available and online on the web platform to monitor the activities, support the participants in the learning process and provide technical assistance. The web platform can also be used for communications with fellow participants and the teachers.

In this course two level of tutoring will be activated:

- **I level tutors** will help participants with technical and organization issues
- **II level tutors**, as experts of content, will be available for answering content questions

COURSE CONTENTS

This course will provide methods and technical elements for the strengthening of technical, scientific and management skills related to integrated water services, treatment and reuse of water, with particular reference to urban areas, as well as an introduction to methods for the management and start-up of wastewater plants.

The aim is providing technical and practical tools for design, sizing, management and maintenance of plants used for wastewater treatment and water reuse in industrial, agricultural and domestic purposes.

Units

The contents are divided into **Didactic Units**, each focused on a specific topic and containing the following elements:

- **Lecture material**: compulsory readings on the main Unit topic
- **Further reading**: optional materials on additional issues connected to the Unit topic
- **Exercise**: a quiz or assignment testing the understanding of the Unit contents

A list of references, including useful links and sources, is provided at the end of each unit for further assistance.

The following Units compose this module:

- **Unit 1**: *Features of the municipal wastewater*
- **Unit 2**: *Physical operations*
- **Unit 3**: *Biological treatment*
- **Unit 4**: *Wastewater treatment in developing countries*
- **Unit 5**: *The management of wastewater treatment plants*
- **Unit 6**: *Sludge formation and management in treatment plants*
- **Unit 7**: *Reuse of treated wastewater, water saving*
- **Unit 8**: *Compatibility criteria and planning of treatment plants*

Calendar

Units will become available according to a calendar announced at the beginning of the course in order to allow enough time for studying the material and participating in all the required activities (thematic forums, quizzes and assignments).

Copyright

All the resources mentioned can be downloaded from the web platform and used in compliance with the **copyright conditions** explained in the application form.



MINIMUM INFORMATIC REQUIREMENTS

Before applying, please make sure that the computer you will use to attend this e-learning course matches the following minimum informatics requirements. This is a mandatory condition for the attendance of the course.

Internet connection

An Internet connection of at least 56kbps is necessary for accessing the learning platform.

Hardware requirements

Operating system: compatibility is ensured with all the main operating systems, including Windows, Linux and Macintosh.

Browser: compatibility is ensured with: Internet Explorer 6 or superior, Mozilla Firefox 3 or superior, and Chrome. We recommend the use of Mozilla Firefox, which is compatible with all the main Operating Systems and ensures an ideal performance at navigating the platform. Mozilla Firefox can be downloaded for free at the link: <https://www.mozilla.org/it/firefox/new/>

Video resolution: 1024x768 (or superior)

Software Requirements

For the correct display of the contents of the course area, Adobe Acrobat must be installed. Adobe Acrobat can be downloaded for free at the link: <https://get.adobe.com/reader>

HOW TO APPLY

Applications for this course will be considered until **May, Tuesday 12, 2020**.

To apply for this course please fill and send the **Application form**, using the online module ([CLICK HERE](#)). In addition, you must send the following mandatory documents to tutor.sanitation@hydroaid.it :

1. **Copy of your ID card or passport**
2. **Copy of your highest education certificate**
3. **Updated Curriculum Vitae**

Only complete applications (application form + mandatory documents) will qualify for the selection process. A confirmation of acknowledgement of your application will follow. Applications sent by other means will not be considered. All candidates will be informed about the results of the selection.

The deadline for applying is May, Tuesday 12, 2020.



SELECTION CRITERIA

The applicants who cannot guarantee the minimum requirements of the course described above (computer access, Internet connection, good knowledge of English) will not be considered. The applicants who qualify for the selection and submit a complete application before the deadline will be evaluated on the basis of merit criteria.

Women's applications are welcome and will be taken into due consideration.

The applications of the participants who abandoned previous distance learning courses will be not considered.

The selection committee will consider the following elements as preferences criteria:

- At least first level degree in Environmental and Land Engineering, Water Resources Engineering, related and/or equivalent academic subjects
- Relevant professional experiences
- Current position in wastewater services

CERTIFICATE OF ATTENDANCE AND EVALUATION CRITERIA

A Certificate of Attendance, signed by the course teachers, will be issued at the end of the course for the participants who achieve a total score of **at least 60%**.

The final score is composed by the performance of each participant in the **5 components** of the course (*attendance, merit, participation, first and final assignment*). Points are assigned to performances above the minimum requirements, as detailed in the table below:

Requirements	Requirements for maximum grade	
Course components	Performance	Equivalent to
Attendance <i>Download / visualization of lecture material</i>	8/8 units	4%
Merit <i>Average final grade in all the exercises (quizzes / assignments)</i>	Grade 10/10	60%
Participation <i>Relevant forum posts in the thematic forums</i>	16 posts	16%
First assignment <i>Realization of an individual essay / case study analysis</i>	Grade 10/10	5%
Final assignment <i>Realization of an individual essay / case study analysis</i>	Grade 10/10	15%
Total score	100%	

Certificates will be sent via e-mail and will contain a brief description of the course and the total amount of hours required for its attendance.



NOTE

We ask for a serious commitment when enrolling the course so that your participation does not exclude the one of another potential candidate. Please evaluate carefully your interest and your availability to attend the on line activities (time, requirements, etc).

CONTACTS

For further information, please contact:

Phone: + 39 011 5694336
Fax: + 39 011 5693690
Website: www.hydroaid.org
E-mail: tutor.sanitation@hydroaid.it

[Connect with our network](#) to stay in touch with candidates, course participants, teachers and other professionals, and for more information.

