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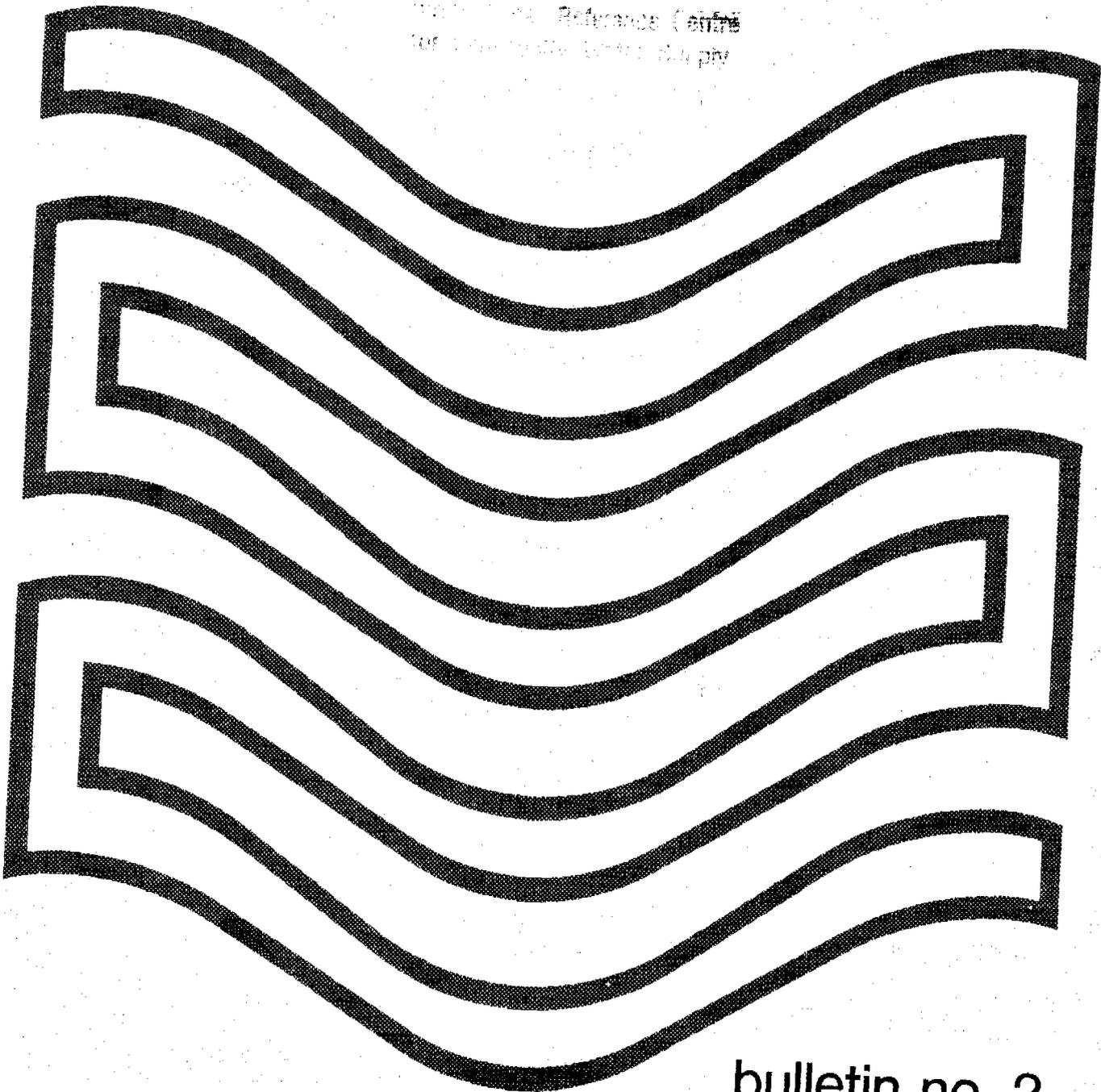
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**who international reference centre
for community water supply**

parkweg 13, the Hague, the Netherlands

**training courses in community
water supply 1971**

WHO
International Reference Centre
for Community Water Supply



bulletin no. 2.

041 -71TR-1155

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WORLD HEALTH ORGANIZATION
INTERNATIONAL REFERENCE CENTRE FOR COMMUNITY WATER SUPPLY

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International Reference Centre
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TRAINING COURSES IN
COMMUNITY WATER SUPPLY 1971

BULLETIN NO. 2

Courses offered by Institutions
collaborating with W.H.O. Inter-
national reference Centre for
Community Water Supply

OCTOBER 1971
THE HAGUE - THE NETHERLANDS

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1. INTRODUCTION

Manpower plays a vital role in all fields of human activity. The personnel problems and personnel policy are also of great importance for community water supply. Planning, design, construction, supervision, management, operation, maintenance, and surveillance of community water supplies demand the service of trained personnel. In order to meet the demands for qualified personnel, the education and training courses at various levels are organized by education institutions and different bodies involved in water industry.

Within its activity the W.H.O. International Reference Centre for Community Water Supply is collecting information on the present picture of education and professional training in the field of community water supply.

This bulletin gives information on training courses and programs offered by Institutions collaborating with the W.H.O. International Reference Centre for Community Water Supply.

The courses have been divided into the following four groups:

1. University grade courses
2. Courses for engineering and professional staff
3. Courses in operation of plants
4. Courses for skilled labour

The Centre hopes that, with this information in hand, a choice for proper training will be facilitated.

2. INSTITUTIONS COLLABORATING WITH THE W.H.O. INTERNATIONAL REFERENCE CENTRE FOR COMMUNITY WATER SUPPLY.

1. Office de la Recherche Scientifique et Technique Outre-Mer
Service Central Hydrologique
19, Rue Eugène Carrière
75-Paris 18e
France
2. The Water Research Association
Ferry Lane, Medmenham
Marlow, Bucks., SL7 2HD
England
3. Sanitary Engineering Laboratory
Middle East Technical University
Ankara
Turkey
4. Consiglio Nazionale delle Ricerche
Via Reno 1
00198 Rome
Italy
5. Centre of Sanitary Engineering
The University of Naples
Via Claudio 21
Naples
Italy
6. Testing and Research Institute of the Netherlands Waterundertakings KIWA Ltd. (No courses available)
Sir Winston Churchilllaan 273
Rijswijk Z.H.
The Netherlands
7. Department of Civil Engineering
University of Newcastle upon Tyne
Claremont Road
Newcastle-upon-Tyne - NE1 7RU
England
8. The Institute of Hygiene
The University of Aarhus
Universitetsparken
DK 8000 Aarhus
Denmark
9. Faculty of Engineering and Architecture
University of Khartoum
Khartoum
Sudan
10. Sanitary Engineering Department (No data received)
Faculty of Engineering
The University of Alexandria
Alexandria
U.A.R.

11. Hebrew University
Hadassah Medical School
Jerusalem
Israel
12. Water Quality Office
Environmental Protection Agency
Crystal Mall Bldg. 2
Washington, D.C. 20242
U.S.A.
13. Department of Environmental Sciences
and Engineering
School of Public Health
University of North Carolina
Chapel Hill, North Carolina 27514
U.S.A
14. Department of Environmental Engineering
College of Engineering
University of Florida
Gainesville, Florida 32601
U.S.A.
15. Instituto de Engenharia Sanitária
Rua Fonseca Teles 121 - 15º andar
Rio de Janeiro
Brazil
16. Department of Sanitary Engineering
Central University of Venezuela
Caracas
Venezuela
17. National Sanitation Foundation
2355 West Stadium Boulevard
Ann Arbor, Michigan 48106
U.S.A. (No courses available)
18. Faculty of Engineering
Civil Engineering Department
University of Science and Technology
Kumasi
Ghana
19. Faculty of Engineering
University of Lagos
Lagos
Nigeria
20. The Victoria Jubilee Technical Institute
Matunga
Bombay
India
21. Environmental Engineering
Asian Institute of Technology
P.O. Box 2754
Bangkok
Thailand

22. Department of City Planning and Sanitary Engineering
Faculty of Engineering
University of Tokyo
Hongo 7-3, Bunkyo-ku
Tokyo
Japan
23. The All-India Institute of Hygiene and Public Health
110, Chittaranjan Avenue
Calcutta
India
24. Central Public Health Engineering Research Institute
Nehru Marg
Nagpur-3
India
25. The University of Nairobi
Box 30187
Nairobi
Kenya
26. Institute of Hydro-Sciences and Water Resources Technology
64, Ghadessi Street
Teheran
Iran
27. Department of General and Environmental Hygiene
The Institute of Hygiene and Epidemiology
Srobarova 48
Prague 10
Czechoslovakia
28. Centre Belge d'Etude et de Documentation des Eaux CEBEDEAU
2, Rue Armand Stévant
B 4000 Liege
Belgium

3.1. UNIVERSITY GRADE COURSES

Name of the Course	Institution
Undergraduate Course in Public Health Engineering	Department of Civil Engineering University of Newcastle upon Tyne Newcastle-upon-Tyne, England
Postgraduate Course in Public Health Engineering	idem
Undergraduate Course in Water Resources	idem
Postgraduate Course in Water Resources	idem
Undergraduate Course in Hydrology	idem
Postgraduate Course in Hydrology	idem
Course in Civil Engineering (Undergraduate Course)	Faculty of Engineering and Architecture, University of Khartoum, Khartoum, Sudan
Public Health (Graduate Course) Environmental Health Major	Hebrew University, Hadassah Medical School, Jerusalem, Israel
Program in Sanitary Engineering and Water Resources (Graduate Course)	Dept. of Environmental Sciences and Engineering, School of Public Health, University of North Carolina, Chapel Hill, North Carolina, U.S.A.
Program in Environmental Chemistry and Biology (Graduate Course)	idem
Program in Environmental Engineering (Graduate Course)	Department of Environmental Engineering, College of Engineering, University of Florida, Gainesville, Florida, U.S.A.
Undergraduate Course in Sanitary Engineering	Department of Sanitary Engineering, Central University of Venezuela, Caracas, Venezuela
Postgraduate Course in Sanitary Engineering	idem
Course in Civil Engineering (Undergraduate Course)	Faculty of Engineering, Civil Engineering Dept., University of Science and Technology, Kumasi, Ghana
Course in Sanitary Engineering (Postgraduate Course)	idem
Public Health Engineering	Faculty of Engineering, University of Lagos, Lagos, Nigeria

Name of the Course	Institution
Course in Public Health Engineering (Postgraduate Course)	The Victoria Jubilee Technical Institute, Bombay, India
Course in Environmental Engineering (Postgraduate Course)	Environmental Engineering, Asian Institute of Technology, Bangkok, Thailand
Undergraduate Course in City Planning and Sanitary Engineering	Department of City Planning and Sanitary Engineering, Faculty of Engineering, University of Tokyo, Tokyo, Japan
Graduate Course in City Planning and Sanitary Engineering	idem
Postgraduate Course in City Planning and Sanitary Engineering	idem
Master of Engineering (Public Health)	The All-India Institute of Hygiene and Public Health, Calcutta, India
Postgraduate Course in Hydrology	Institute of Hydro Sciences and Water Resources Technology, Teheran, Iran
Postgraduate Course in Surface Hydrology	idem
Postgraduate Course in Water Quality	idem
Postgraduate Course in Sanitary Engineering	idem

3.2 COURSE FOR ENGINEERING AND PROFESSIONAL STAFF

Name of the Course	Institution
Course in Formation of Investigators in Hydrology	Office de la Recherche Scientifique et Technique Outre-Mer, Paris, France
Training for Professional Improvement	idem
Chromatographic Determination of Organo-chlorine Insecticides	The Water Research Association, Marlow, Bucks., SL7 2HD, England
Statistics for Analysts	idem
Thin Layer Chromatography	idem
Zoology in Relation to Waterworks	idem
Animal Infestation Control	The Water Research Association, Marlow, Bucks., SL7 2HD, England and the Water Supply Industry Training Board, London, England
Design and Planning of a Water Distribution System	idem
Chemical and Biological Sampling for Instructors	idem
Waste Detection and Control Measures	idem
Design of Fluoride Dosing Schemes	idem
Laboratory Technicians Course on Treatment and Quality Control	idem
Chemistry and Microbiology of Water and Wastes	Sanitary Engineering Laboratory, Middle East Technical University, Ankara, Turkey
Environmental Sanitation	idem
Water and Waste Water Treatment	idem
Advanced Studies in Sanitary Engineering	idem
Course on Desalting Membranes	Consiglio Nazionale delle Ricerche, Istituto di Ricerca sulle Acque, Rome, Italy
Course on River Basin Pollution	idem
Specialistic Course in Sanitary Engineering (Postgraduate Course)	Centre of Sanitary Engineering, The University of Naples, Naples, Italy

Name of the Course	Institution
Coastal Pollution Prevention	The Institute of Hygiene, The University of Aarhus, Aarhus, Denmark
Seminars in Quantitative Bacteriology and Taxonomy	idem
Applied Hydrology	Hebrew University, Hadassah Medical School, Jerusalem, Israel
Fluoride Determination in Drinking Waters - 142WH	Water Quality Office, Environmental Protection Agency, Washington D.C., U.S.A.
Ground Water Technology - 161WH	idem
Operation and Control of Water Systems Supplied from Wells - 157WH	idem
Sp. Anal. Techn.-Thin Layer Chromatography - 711WH	idem
Sp. Anal. Techn.-Gas Chromatography - 710WH	idem
Sp. Anal. Techn.-Atomic Absorption - 712WH	idem
Chemical Examination of Drinking Water - 141WH	idem
Unit Process-Water Treatment Plant Operation - 158WH	idem
Water Supply Sanitary Survey - 160WH	idem
Bacteriological Examination of Drinking Water - 140WH	idem
Treatment of Industrial Wastes	Instituto de Engenharia Sanitária, Rio de Janeiro, Brazil
Bacteriological Analyses for Water Quality	idem
Statistical Methods for Sanitary Engineering	idem
Physical and Chemical for Water Analyses	idem
Elements of Air Pollution Control	idem
Aquatic Biology for Engineer	idem

Name of the Course	Institution
Laboratory Techniques for Hydrobiologists	Instituto de Engenharia Sanitária, Rio de Janeiro, Brazil
Coagulation Control in Water Treatment	idem
Elements of Water Quality for Agricultural Supply	idem
Laboratory Techniques	idem
New Concepts in Water Treatment and Filtration	idem
Epidemiology of Water Borne Diseases	idem
Modern Techniques of Water Treatment	idem
Sewage Pumping Stations	idem
Techniques of Fluoridation in Water Supply	idem
Sampling Programs for Water Examination	idem
Project and Construction of Sanitary Pits	idem
Application of Electronic Computers in Sanitary Engineering Problems	idem
Water and Waste Water Analysis	Central Public Health Engineering Research Institute, Nagpur, India
Corrosion Control in Water and Waste Water Engineering	idem
Process Design in Waste Treatment	idem
Air Pollution Control	idem
Sewage Farming	idem
City Refuse Disposal	idem
Structural Design for Public Health Engineers	idem
Technicians Course	Institute of Hydro-Sciences and Water Resources Technology, Teheran, Iran
In Service Training Course for Government Staff in Hydrology	idem

Name of the Course	Institution
Course in Sanitary Engineering	Centre Belge d'Etude et de Documentation des Eaux CEBEDEAU, Liege, Belgium
Water	idem
Post-graduate Course in Public Health Engineering	Faculty of Engineering, University College, Nairobi, Kenya
Problems of Drinking Water Fluoridation	Department of General and Environmental Hygiene, The Institute of Hygiene and Epidemiology, Prague, Czechoslovakia
Training Course of Practical Hydrobiology for Hygienists	idem

3.3. COURSES IN OPERATION OF PLANTS

Name of the Course	Institution
Unit Process-Water Treatment Plant Operation - 158WH	Water Quality Office, Environmental Protection Agency, Washington, U.S.A.
Swimming-pool Operations	Instituto de Engenharia Sanitária, Rio de Janeiro, Brazil
Sewage Treatment Plant Operators	Central Public Health Engineering Research Institute, Nagpur, India

3.4. COURSES FOR SKILLED LABOUR

Name of the Course	Institution
Plastic Plumbing	Central Public Health Engineering Research Institute, Nagpur, India

Office de la Recherche Scientifique et Technique Outre-Mer
 24, Rue Bayard
 Paris 8e
 France

Name of the Course	Language	Sponsor	Pre-requisite for admission	Degree, diploma or certificate awarded	Duration of the course	No. of participants	No. of courses held to date	Course fees per participant
Course in Formation of Investigators in Hydrology	French	ORSTOM	Degree in Science or Applied Science	ORSTOM's diploma in Hydrology	1 year in Paris + 1 year overseas	about 5	every year	-
Training for Professional Improvement	French	ORSTOM	Degree in Hydrology	-	2 weeks - 6 months	about 3	every year	-

The Water Research Association
 Ferry Lane, Medmenham
 Marlow, Bucks., SL7 2HD
 England

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
<u>Courses prepared and presented by WRA:</u>								
Chromatographic De- termination of Orga- no-chlorine Insecti- cides	English	WRA	Employer's recommen- dation	None	5 days	8	4	£10.-
Statistics for Analysts	English	WRA	Employer's recommen- dation	None	3 days	8	2	£10.-
Thin Layer Chroma- tography	English	WRA	Employer's recommen- dation	None	5 days	8	2	£10.-Members £50.-Non- Members
Zoology in Relation to Waterworks	English	Oxford Water- works	Employer's recommen- dation	None	5 days	8	1	Not appli- cable
Courses on other subjects are pre- pared according to demand	English							
<u>Courses prepared for other organizations:</u>								
Animal Infestation Control	English	WSITB	Employer's recommen- dation	None	4 days	15	5	Not appli- cable

The Water Research Association
 Ferry Lane, Medmenham
 Marlow, Bucks., SL7 2HD
 England

continued.

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Design and Planning of a Water Distri- bution System	English	WSTIB	Employer's recommen- dation	None	5 days	15	9	Not appli- cable
Chemical and Biolo- gical Sampling for Instructors	English	WSITB	Employer's recommen- dation	None	1 day	15	1	Not appli- cable
Waste Detection and Control Measures	English	WSITB	Employer's recommen- dation	None	5 days	15	3	Not appli- cable
Design of Fluoride Dosing Schemes	English	WSITB	Employer's recommen- dation	None	2 days	15	1	Not appli- cable
Laboratory Techni- cians Course on Treatment and Qua- lity Control	English	WSITB	Employer's recommen- dation	None	$\frac{1}{2}$ day	15	3	Not appli- cable

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Sanitary Engineering Laboratory
 Middle East Technical University
 Ankara
 Turkey

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Chemistry and Micro- biology of Water and Wastes	English		B.S. Degree	-	1 semester	15	since 1967	250 T.L. per se- mester
Environmental Sani- tation	English		B.S. Degree	-	1 semester	15	since 1967	250 T.L. per se- mester
Water and Waste Water Treatment	English		B.S. Degree	-	1 semester	15	since 1967	250 T.L. per se- mester
Advanced Studies in Sanitary Engineering	English		B.S. Degree	-	1 semester	15	since 1967	250 T.L. per se- mester
<p>Note: Courses are at graduate level and programmed for M.S. Degree curricula. A student with a B.S. Degree in engineering can be accepted and complete programme of sanitary engineering supported with hydraulic engineering courses, as related is necessary for the completion of the M.S. Degree. A thesis work is also required where a student should spent at least one (1) calender year at the university including the courses he has to take. But courses are open to all interested if he has the prerequisite for admission.</p>								

Consiglio Nazionale delle Ricerche
 Istituto di Ricerca sulle Acque
Rome
 Italy

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Course on Desalting Membranes	Italian						2	
Course on River Basin Pollution	Italian							

Centre of Sanitary Engineering
 The University of Naples
 Via Mezzocannone 16
Naples
 Italy

Name of the Course	Language	Sponsor	Pre-requisite for admission	Degree, diploma or certificate awarded	Duration of the course	No. of participants	No. of courses held to date	Course fees per participant
Specialistic Course in Sanitary Engineering (Postgraduate Course)	Italian	University of Naples	Degree in Engineering	Diploma of specialization in Sanitary Engineering	7 months	~ 15 per year	15	~ US \$100.

Department of Civil Engineering
 University of Newcastle upon Tyne
 Claremont Road
 Newcastle-upon-Tyne NE1 7RU
 Great Britain

Name of the Course	Language	Sponsor	Pre-requisite for admission	Degree, diploma or certificate awarded	Duration of the course	No. of participants	No. of courses held to date	Course fees per participant
Undergraduate Course in Public Health Engineering	English							
Postgraduate Course in Public Health Engineering	English	SRC	Usually Honours Degree in Science or Applied Science	M.Sc. Dipl./Cert.	12 months 9 months	10 (average)	21	£75.- (students in UK) £250.- (students outside U.K.)
Undergraduate Course in Water Resources *	English							
Postgraduate Course in Water Resources	English	NERC	Usually Honours Degree in Science or Applied Science	M.Sc.	12 months	4 (average)	5	
Undergraduate Course in Hydrology *	English							
Postgraduate Course in Hydrology	English	NERC	Usually Honours Degree in Science or Applied Science	M.Sc. Diploma	12 months 9 months	5 (average)	6	

Department of Civil Engineering
University of Newcastle upon Tyne
Claremont Road
Newcastle-upon-Tyne NE1 7RU
Great Britain

continued.

- * The undergraduate course of study in the Civil Engineering Department is a three years course leading to an Honours Degree B.Sc. Applied Science. Exceptionally, students not satisfying fully the admission conditions, may be admitted to a four years course starting with a preliminary year. In the final year students take a specialized option including either Public Health Engineering or Hydrology and Hydraulic Engineering. The undergraduate course has no option in Water Resources. On average the final year option includes about 8 students.

The Institute of Hygiene
 The University of Aarhus
 Universitetsparken
 DK 8000 Aarhus C.
 Denmark

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Coastal Pollution Prevention	English	W.H.O.	Election by W.H.O.	-	1 month	15 - 20	2	-
Seminars in Quanti- tative Bacteriology and Taxonomy	Scandi- navian	Insti- tute of Hygiene	Election by home institute, minimum require- ment cor- resp.B.Sc.	Certificate	1 month	2 - 3	2	- Grants from home insti- tute

Name of the Course	Language	Sponsor	Pre-requisite for admission	Degree, diploma or certificate awarded	Duration of the course	No. of participants	No. of courses held to date	Course fees per participant
Course in Civil Engineering (Undergraduate Course)	English	University of Khartoum (with grants from the Sudan Government)	G.C.E. A-Level or Sudan School Certificate with 5 Credits plus one year in our preliminary Science	B.Sc.Eng. in Civil Engineering	4 years normally preceded by one year in the Faculty of Science for those with Sudan School Certificate	About 40 in each class	26 batches (total ca. 257 graduate Civil Engineers from 1944 to 1971)	ca. £250.- per year (including lodging)

Hebrew University
 Hadassah Medical School
Jerusalem
Israel

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Public Health (Gra- duate Course) Environmental Health Major	English	Hebrew Univer- sity	B.Sc.	M.P.H.	18 months	14	1	
Applied Hydrology	English	Hebrew Univer- sity	B.Sc.	Diploma	10 months	35	3	

Water Quality Office
 Environmental Protection Agency
 Washington D.C. 20242
 U.S.A.

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Fluoride Determinat- ion in Drinking Waters - 142WH	English	Water Hygiene Division, Water Quality Office, EPA	Baccalaure- ate Degree or equiva- lent train- ing and ex- perience accepted	Certificate	3 days	20	An ave- rage of 2 times per year for last 5 years	No tuition or regis- tration fee
Ground Water Techno- logy- 161WH	English	idem	idem	idem	1 week	20	idem	idem
Operation and Control of Water Systems Sup- plied from Wells - 157WH	English	idem	idem	idem	1 week	24	idem	idem
Sp. Anal. Techn.-Gas Chromatography - 710WH	English	idem	idem	idem	1 week	20	idem	idem
Sp. Anal. Techn.-Thin Layer Chromatography 711WH	English	idem	idem	idem	3 days	20	idem	idem
Sp. Anal. Techn.-Ato- mic Absorption - 712WH	English	idem	idem	idem	3 days	20	idem	idem
Chemical Exam. of Drinking Water - 141WH	English	idem	idem	idem	1 week	24	idem	idem

continued.

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Unit Process-Water Treatment Plant Operation - 158WH	English	Water Hygiene Division, Water Quality Office, EPA	Baccalaure- ate Degree or equiva- lent train- ing and ex- perience accepted	Certificate	1 week	30	An ave- rage of 2 times per year for last 5 years	No tuition or regis- tration fee
Water Supply Sani- tary Survey - 160WH	English	idem	idem	idem	1 week	30	idem	idem
Bacteriological Exam. of Drinking Water - 140WH	English	idem	idem	idem	1 week	24	idem	idem

Department of Environmental Sciences and Engineering
 School of Public Health
 University of North Carolina
 Chapel Hill, North Carolina 27514
 U.S.A.

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Program in Sanitary Engineering and Water Resources (Graduate Course)	English		B.S. in engineering B average	MSEE, M.S.	11 or 21 months	20	30	US \$2100.-/ year
Program in Environ- mental Chemistry and Biology (Graduate Course)	English		B.S. in science, usually physics, chemistry or biology	M.S., MSPH	11 or 21 months	29	30	US \$2100.-/ year

Department of Environmental Engineering
 College of Engineering
 University of Florida
 Gainesville, Florida 32601
 U.S.A.

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Program in Environ- mental Engineering (Graduate Course)								

Instituto de Engenharia Sanitária
 Rua Fonseca Teles 121 - 15º
 Rio de Janeiro
 Brazil

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Course in Swimming- pool Operations	Porto- guese	IES	Primary School	Certificate	2 weeks	30	12	US \$30.-
Course in Treatment of Industrial Wastes	Porto- guese and Spanish	IES OPS	University or Post- Graduate	Certificate	2 weeks	25	2	US \$50.-
Course in Bacterio- logical Analysis for Water Quality	Porto- guese	IES	University or Post- Graduate	Certificate	2 weeks	12	5	US \$40.-
Course in Statisti- cal Methods for Sa- nitary Engineering	Porto- guese	IES	University or Post- Graduate	Certificate	2 weeks	25	1	US \$40.-
Course in Physical and Chemical for Water Analysis	Porto- guese	IES	University or Post- Graduate	Certificate	2 weeks	15	4	US \$50.-
Course in Elements of Air Pollution Control	Porto- guese	IES	University or Post- Graduate	Certificate	1 week	40	3	US \$25.-
Course in Aquatic Biology for Engineer	Porto- guese	IES	University or Post- Graduate	Certificate	2 weeks	30	3	US \$40.-
Course in Laboratory Techniques for Hydro- biologists	Porto- guese	IES	University or Post- Graduate	Certificate	2 weeks	15	2	US \$40.-

Instituto de Engenharia Sanitária
 Rua Fonseca Teles 121 - 150
Rio de Janeiro
 Brazil

continued.

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Course in Coagulation Control in Water Treatment	Porto- guese	IES	University or Post- Graduate	Certificate	1 week	20	2	US \$25.-
Course in Elements of Water Quality for Agricultural Supply	Porto- guese	IES	Primary and Profession- al	Certificate	1 week	30	1	US \$25.-
Course in Laboratory Techniques	Porto- guese	IES	Primary and Profession- al	Certificate	2 weeks	15	1	US \$40.-
Course in New Concepts in Water Treatment and Filtration	English	IES OPS	University and Post- graduate	Certificate	1 week	30	1	US \$40.-
Course in Epidemiology of Water Borne Diseases	Porto- guese	IES	University and Post- graduate	Certificate	3 days	50	2	US \$10.-
Course in Modern Techniques of Water Treatment	Porto- guese	IES	University and Post- graduate	Certificate	2 weeks	60	1	US \$50.-
Course in Sewage Pumping Stations	Porto- guese	IES	University and Post- graduate	Certificate	1 week	60	1	US \$30.-
Course in Techniques of Fluoridation in Water Supply	Porto- guese	IES OPS	University and Post- graduate	Certificate	1 week	30	1	US \$40.-

Instituto de Engenharia Sanitária
 Rua Fonseca Teles 121 - 15º
Rio de Janeiro
 Brazil

continued.

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Course in Sampling Programs for Water Examination	Porto- guese	IES	Primary	Certificate	1 week	35	1	US \$30.-
Course in Project and Construction of Sani- tary Pits	Porto- guese	IES	University and Post- Graduate	Certificate	1 week	40	2	US \$30.-
Course in Applicat- ion of Electronic Computers in Sani- tary Engineering Problems	Porto- guese and Spanish	IES OPS	University and Post- Graduate	Certificate	2 weeks	20	1	US \$60.-

Department of Sanitary Engineering
 Central University of Venezuela
 Caracas
 Venezuela

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Undergraduate Course in Sanitary Engineer- ing					5 years			
Postgraduate Course in Sanitary Engineer- ing					1 year			

Faculty of Engineering
 Civil Engineering Department
 University of Science and Technology
Kumasi
 Ghana

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Course in Civil Engineering (Under-graduate Course)	English	Ghana Government	*	B.Sc. in Civil Engineering	4 years	35	8	NØ 400.-
Course in Sanitary Engineering (Post-graduate Course)	English	Ghana Government	B.Sc. in Civil or Chemical Engineering	M.Sc. and Post Graduate Diploma	2 years (M.Sc.) 1 year (Dip.)	8	2	NØ 400.-
<p>* Advanced level in three of the following, or other equivalent qualifications: Pure Mathematics Applied Mathematics Physics Chemistry</p>								

Faculty of Engineering
 University of Lagos
Lagos
 Nigeria

Name of the Course	Language	Sponsor	Pre-requisite for admission	Degree, diploma or certificate awarded	Duration of the course	No. of participants	No. of courses held to date	Course fees per participant
Public Health Engineering	English	University of Lagos	G.C.E. (A Level) in Physics, Mathematics, Chemistry	B.Sc. (Civil Engineering)	3 years after G.C.E. (P.H.E. is only third year of course)	13 in 1970/1971 session	4	£N181.6

Name of the Course	Language	Sponsor	Pre-requisite for admission	Degree, diploma or certificate awarded	Duration of the course	No. of participants	No. of courses held to date	Course fees per participant
Course in Public Health Engineering (Postgraduate course)	English	Course is held in V.J.T.I. which is affiliated to University of Bombay	B.E.(Civil) with Second Class	Degree of Master of Civil Engineering	15 months for Papers and 6 months for dissertation work	15 - 20 Out of the above seats, 10 are meant for candidates deputed by various State Governments	From 1961 to 1971 total no. of candidates admitted are 84	Rs.1000/- as tuition fees and Rs. 300/- as examination fees for the complete course

Environmental Engineering
 Asian Institute of Technology
Bangkok
 Thailand

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Course in Environ- mental Engineering (Postgraduate Course)	English	Indepen- dent	Bachelor's Degree in Engineering or equiva- lent	Master of En- gineering	21 months (5 terms)	14 - 24		US \$1120.- per term
				Doctor of En- gineering	Min. 21 months beyond M.Eng.	-		
				Diploma A.I.T.	8 months (2 terms)	1		US \$1120.- per term

Department of City Planning and Sanitary Engineering
 Faculty of Engineering
 University of Tokyo
Tokyo
 Japan

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Undergraduate Course in City Planning and Sanitary Engineering	Japanese	Govern- ment of Japan		Degree of Bachelor	4 years	18 (to- tal 50)		
Graduate Course in City Planning and Sanitary Engineering	Japanese	Govern- ment of Japan		Degree of Master	2 years	6 (to- tal 20)		
Postgraduate Course in City Planning and Sanitary Engineering	Japanese	Govern- ment of Japan		Degree of Doctor	3 years	3 (to- tal 8)		

The All-India Institute of Hygiene and Public Health
Calcutta
India

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Master of Engineer- ing (Public Health)	English	Ministry of Health Govern- ment of India but the degree is award- ed by the Universi- ty of Cal- cutta	B.E.(Civil) recognised by the Uni- versity of Calcutta	Degree M.E. (P.H.)	One acade- mic year followed by one year of super- vised field training	Sanct- ioned strength 30	23	Rs.300/. tuition fee Rs. 35/- other charges Rs.100/- refundable caution money

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Water and Waste Water Analysis	English	CPHERI Nagpur	Degree in Chemistry or Biolo- gy	Certificate	8 weeks (Feb-March Aug-Sept)	15	2	Rs.200/-
Corrosion Control in Water and Waste Water Engineering	English	CPHERI Nagpur	Degree or Diploma in Engineer- ing or Chemistry	None	4 days (February)	30	1	Rs. 50/-
Plastics Plumbing	English/ Hindi	CPHERI Nagpur	Experience in plumbing or as en- gineering/ architectur- al assist- ant	None	2 days (March, De- cember)	30	2	Rs. 25/-
Sewage Treatment Plant Operators	English	CPHERI Nagpur	Degree in Science or Diploma / Degree in Engineer- ing, pre- ferably with expe- rience in operation of treat- ment plants	Certificate	2 weeks (March - April)	15	1	Rs.100/-

continued.

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Process Design in Waste Treatment	English	CPHERI Nagpur	Degree in Civil or Chemical Engineer- ing, pre- ferably with post graduate qualificat- ion in pu- blic health	Certificate	4 weeks (May - June)	10 - 15	1	Rs.100/-
Air Pollution Control	English	CPHERI Nagpur	Science or Engineering Graduate	Certificate	2 weeks (July)	15		Rs.100/-
Sewage Farming	English	CPHERI Nagpur	Engineering or auxillary personnel	None	3 days (November)	15	1	Rs. 25/-
City Refuse Disposal	English	CPHERI Nagpur	Engineering or auxillary personnel	None	3 days (November)	15	1	Rs. 25/-
Structural Design for Public Health Engineers	English	CPHERI Nagpur	Civil or Structural Engineer in- volved in design of public health engineering units	Certificate	2 weeks (December)	10	1	Rs.100/-

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Postgraduate Course in Public Health Engineering	English	Univer- sity of Nairobi	B.Sc. in Civil En- gineering	None	One week	about 25	1	KShs.250/-

Institute of Hydro-Sciences and Water Resources Technology
Teheran
Iran

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Postgraduate Course in Hydrology	Persian*	IHT		M.Sc. Degree	18 months	15	5	Approx. US \$200.-
Postgraduate Course in Surface Hydrology	Persian*	IHT		M.Sc. Degree		15	2	Approx. US \$200.-
Postgraduate Course in Water Quality	Persian*	IHT		M.Sc. Degree	18 months	10 - 20	-	Approx. US \$200.-
Postgraduate Course in Sanitary Engineer- ing	Persian*	IHT		Equivalent to M.S. Degree	9 months	15	1	Non
Technicians Course	Persian*	IHT		Certificate	2 years	53	3	Non
In service training courses for govern- ment staff in Hydro- logy	Persian*	IHT		Certificate	2-6 months	10 - 30	13	Non
* Persian, with translation from English and French to Persian when the lecture is given by foreign experts.								

Name of the Course	Language	Sponsor	Pre-requi- site for admission	Degree, diploma or certificate awarded	Duration of the course	No. of parti- cipants	No. of courses held to date	Course fees per participant
Problems of Drinking Water Fluoridation	Czech	VTS Water- works Prague and I.H.E.	Practice in waterworks operation	None	1 day	50	1	100.-Kcs
Training course of practical hydrogiology for hygienists	Czech	I.H.E.	Public Health School or High School	None	14 days	max. 5 per course	about 1 - 2 times a year	Not appli- cable

Centre Belge d'Etude et de Documentation des Eaux
 CEBEDEAU
 Liege
 Belgium

Name of the Course	Language	Sponsor	Pre-requisite for admission	Degree, diploma or certificate awarded	Duration of the course	No. of participants	No. of courses held to date	Course fees per participant
Course in Sanitary Engineering	French	University of Liege	Degree in Civil Engineering, Chemistry or Biology		February - June (once a year)	about 15		
Water	Dutch	University of Ghent	Degree in Civil Engineering		1 year	variable		