

BULLETIN OF

FIELD TRAINING PROGRAMS

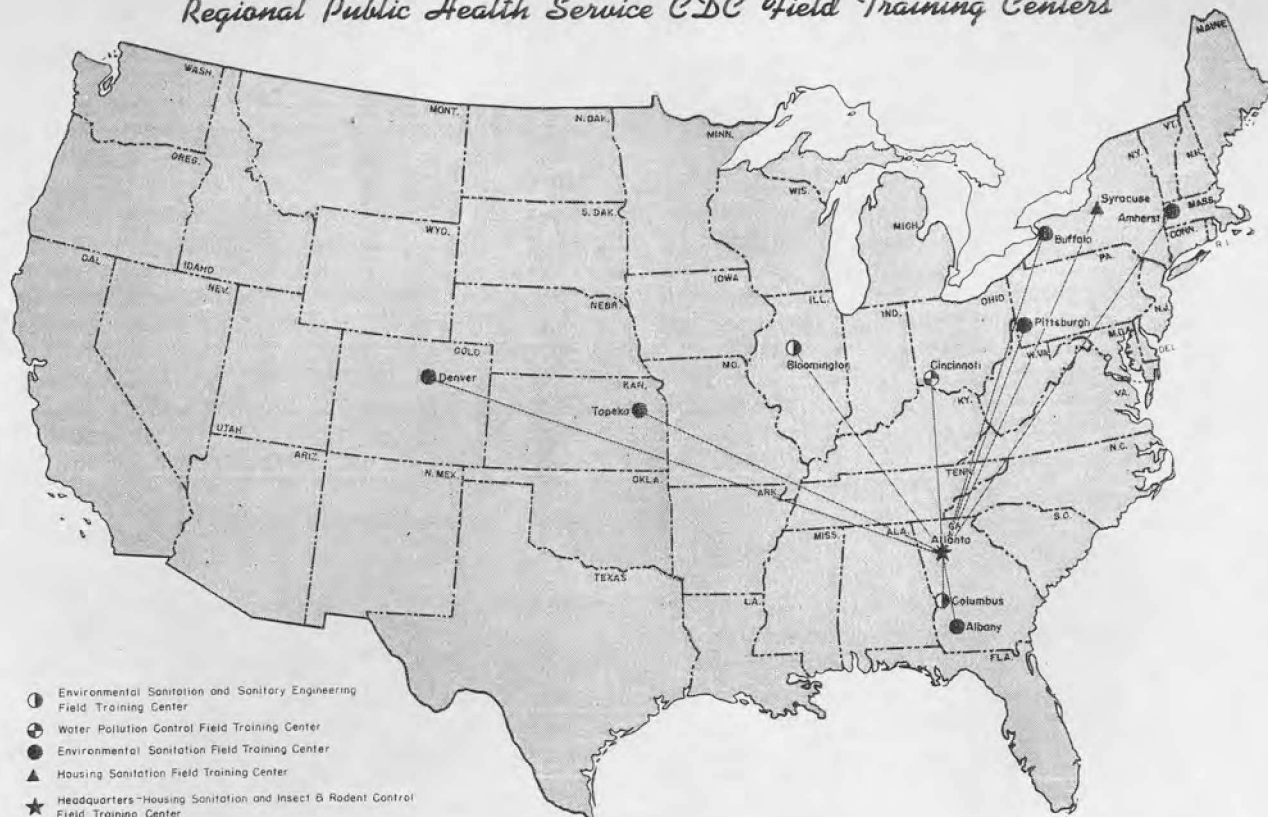
JAN.1 - DEC.31

1951

**FEDERAL SECURITY AGENCY
Public Health Service
Communicable Disease Center
Atlanta, Georgia**

Field Training
of
PUBLIC HEALTH WORKERS
1951

Regional Public Health Service CDC Field Training Centers



Field Training Plans for 1951

Training Services, Communicable Disease Center, at Atlanta, Ga., now is completing its fifth year, cooperating with States to develop more effective field training for all types of public health workers. In the past, this effort has been predominantly in the field of environmental sanitation field training. At present, the program is expanding rapidly into other categories, such as health officer, health educator, sanitary engineer, sanitarian, sanitary inspector, records clerk, and foreign public health administrators field training.

Regional field training centers are now in operation at (1) Amherst, Mass.; (2) Buffalo, N.Y.; (3) Pittsburgh, Pa.; (4) Bloomington, Ill.; (5,6) Atlanta and Columbus, Ga.; (7) Topeka, Kans.; (8) Denver, Colo.; and (9) Cincinnati, Ohio.

(1) Amherst, Mass., is the central headquarters for an over-all field training program to serve the New England States for field training of all types of public health workers. Headquarters is maintained at the University of Massachusetts.

(2) Buffalo, N.Y., serves New York State for field training of sanitation personnel. It is a fundamental unit in a comprehensive field training program, which is administered by the Office of Professional Training at Albany, N.Y., where health officer, health educator, and sanitation field training educational directors are assigned by CDC.

(3) Pittsburgh, Pa., serves a regional area, including Pennsylvania, Ohio, West Virginia, and New Jersey. It now is giving field training to sanitarians. Close cooperation is maintained with the city and State health departments and the school of public health, University of Pittsburgh.

(4) Bloomington, Ill., is the newest regional training center which will train workers in the field of environmental sanitation. This center was established through the cooperation of the Regional Public Health Service Office in Chicago, and the State and local health services in Illinois. It is operating in connection with the McLean County Health Department at Bloomington. It will serve not only Illinois,

but also the nearby States of Wisconsin, Minnesota, Ohio, Kentucky, Indiana, and Michigan.

(5,6) Atlanta and Columbus, Ga., are utilized as field training centers to serve the States in the southeastern section of the country. At these points, graduate sanitary engineers, specialized workers in insect and rodent control, directors of housing sanitation, public health administrators from foreign countries, and sanitarians receive field training experience in courses which run from 3 weeks to 3 months in length. These centers are utilized effectively for leaders being prepared to assume charge of field training. They give 3-month courses in sanitary engineering practice to newly commissioned Regular Corps officers of the U. S. Public Health Service.

(7) Topeka, Kans., is a regional center serving the Midwestern area where specialized milk and food sanitation programs are conducted on a decentralized basis. Two 3-month sanitarian courses are offered each year at Topeka in addition to the many specialized courses given in the nearby States.

(8) The Rocky Mountain Field Training Center at Denver, working in close cooperation with the University of Colorado Medical School at Denver, serves the Rocky Mountain States. Sanitarian courses, as well as specialized programs in milk and food sanitation, are offered here.

(9) From Cincinnati, Ohio, the entire country is served through specialized field training programs in stream pollution control and radiological health. Close cooperation between the Communicable Disease Center and the Environmental Health Center has been effective in developing here practical programs for professional environmental sanitation workers. Rapid expansion in staff and laboratories is under way at present in order to serve the nation more adequately in these two important fields of activity.

FOREIGN VISITOR TRAINING

An increasing number of distinguished visitors from other countries come to our universities and colleges each year to become familiar with public health administration and the techniques of disease prevention. Over 400 of them from 70 different countries have come to Atlanta in the last 4 years to obtain practical experience and to observe training methods.

Sometimes sanitary engineers from other lands remain 3 months to take the complete 12-week course at Columbus, Ga.; at other times, the visitors participate in the malaria control, rodent control, fly control, or laboratory courses at Atlanta. Each year, the number of visitors increases and efforts are made to demonstrate the most advanced sanitation and public health techniques, including the use of audio-visual training aids and training methods at field training centers.

ASSISTANCE TO STATES BY SHORT- AND LONG-TERM ASSIGNMENT OF FIELD TRAINING OFFICERS

The ultimate goal of Training Services is to assist the States in the development of adequate and satisfactory field training centers. This is being accomplished to some extent by assigning training officers for several years to State health departments. During the past year, personnel has been at work at Albany, N.Y., in the Office of Professional Training; at Chapel Hill, N.C., in the School of Public Health; at Columbia, S.C., in the Division of Local Health Services; and at Upper Marlboro, Md., at the State Field Training Center.

Requests have been received from many other State health departments, and as fast as competent trained officers and money become available, those requests will be answered.

Many States in the West, Midwest, South, and East, which are shown on the map, now are operating well equipped, splendid field training centers. Training Services sends training officers to them upon request to operate short training programs in housing, insect and rodent control, and milk and food sanitation. Furnishing audio-visual training aids such as manuals, films, slides, filmstrips, and other teaching materials appears to be helpful in carrying on field training.

At one or more of the regional field training centers, plans are under consideration to offer field training to sanitary engineers in the period following their junior year of academic study. This will be worked out in cooperation with groups of universities.

It appears likely that by 1952, the educational standards for sanitarians in a sufficient number of States will have risen so that a college degree will be required for entrance to both State and regional field training centers. Many progressive States now have this requirement.

It is planned to develop a regional field training center to serve the Pacific Northwest in 1951 by the assignment of training officers to the State health department in Washington.

Great care is being taken to plan the field work at each training center in such a manner that there will be no conflict with didactic courses in universities and schools of public health.

Requirements for admission to courses specify that the trainee should obtain the endorsement of the State health department. The assistance of the Regional Public Health Service Offices during the past 5 years has been of tremendous help in recruitment and in interpreting to the States the ways in which new personnel may receive field training.

Field Training Programs

TABLE OF CONTENTS

	PROGRAM NO. *	TITLE	LOCATION	PAGE NO.
ites in the zed workers ators from om 3 weeks to assume newly com-	1.1-2	General Sanitary Engineering Field Training	Bloomington, Ill.	1
k and food re offered	1.2-3	General Sanitary Engineering Field Training	Columbus, Ga.	3
the Uni- courses,	1.3-3,0	Sanitary Engineering Field Training for Public Health Service Regular Corps Officers	Columbus, Ga.	5
programs e Disease grams for under way activity.	2.1-13	Environmental Sanitation Field Training for Graduate Sanitarians	Amherst, Mass.	7
	2.2-13	Environmental Sanitation Field Training	Amherst, Mass.	9
	2.3-2	Environmental Sanitation Field Training	Bloomington, Ill.	11
	2.4-6	Environmental Sanitation Field Training	Buffalo, N.Y.	13
ties and disease years to	2.5-3	Environmental Sanitation Field Training	Columbus, Ga.	15
	2.6-11	Environmental Sanitation Field Training	Denver, Colo.	17
	2.7-14	Environmental Sanitation Field Training	Pittsburgh, Pa.	19
course at rol, fly orts are e use of	2.8-4	Environmental Sanitation Field Training	Topeka, Kans.	21
	2.9-3	Special Training Programs in Milk Plant Sanitation	Columbus, Ga.	23
	2.10-11	Special Training Program in Milk and Restaurant Sanitation	Denver, Colo.	25
	2.11-14	Special Training Program in Milk Sanitation	Pittsburgh, Pa.	27
	2.12-14	Special Training Program in Restaurant Sanitation	Pittsburgh, Pa.	29
ite and raining een at hool of lboro,	2.13-4	Special Training Programs in Milk and Restaurant Sanitation	Topeka, Kans.	31
	2.14-13	Topical Short Courses	Amherst, Mass.	33
petent	3.1-1	Field Survey and Evaluation Methods in Housing Sanitation	Atlanta, Ga.	35
g well on re- l food other	3.1-	Field Survey and Evaluation Methods in Housing Sanitation	Pacific West Coast	35
	3.1-12	Field Survey and Evaluation Methods in Housing Sanitation	Syracuse, N.Y.	35
field will	3.2-1	Field Survey and Evaluation Methods for Measuring Quality of Housing Environment	Atlanta, Ga.	37
er of e and	3.2-12	Field Survey and Evaluation Methods for Measuring Quality of Housing Environment	Syracuse, N.Y.	37
l by	3.3-1	Special Training Programs in Housing Sanitation	Atlanta, Ga.	39
here	3.4-11	Special Training Program in Housing Sanitation	Denver, Colo.	41
the past hich	4.1-1	Rat-borne Disease Prevention and Control	Atlanta, Ga.	43
	4.2-1	Special Training in Insect and Rodent Control	Atlanta, Ga.	45

*Digit left of decimal indicates basic program type.

Digit right of decimal indicates variations within the basic program.

Digit right of hyphen indicates principal location of field training.

PROGRAM NO. *	TITLE	LOCATION	PAGE NO.
4.3-1	Special Training in Insect Control	Atlanta, Ga.	47
4.4-1	Insect and Rodent Control Training for Foreign Public Health Personnel	Atlanta, Ga.	49
4.5-1	Fly Control	Atlanta, Ga.	51
4.6-1	Decentralized Training Programs in Insect and Rodent Control	Atlanta, Ga.	53
5.1-8	Administration of a Public Health Audio-Visual Program	Chamblee, Ga.	55
5.2-1	Fundamental Methods in Public Health Field Training	Atlanta, Ga.	57
5.3-1	Advanced Course in Public Health Field Training Methods	Atlanta, Ga.	59
6.1-7	Orientation Course for Sanitary Engineers in Water Pollution and Industrial Waste Survey Methods	Cincinnati, Ohio	63
6.2-7	Advanced Sanitary Engineering Training in Water Pollution Abatement Programs	Cincinnati, Ohio	65
6.3-7	Orientation Course for Chemists, Bacteriologists, and Biologists in the Examination of Sewage, Polluted Water, and Industrial Wastes	Cincinnati, Ohio	67
6.4-7	Advanced Training Course for State Sanitary Chemists Primarily Concerned with Water Pollution Investigations	Cincinnati, Ohio	69
6.5-7	Advanced Training Course for State Bacteriologists Primarily Concerned with Water Analysis	Cincinnati, Ohio	71
6.6-7	Advanced Training Course for State Bacteriologists Concerned with the Examination of Milk, Dairy Products, and Food Utensils	Cincinnati, Ohio	73
6.7-7	Training Course in Water and Air Pollution Problems Caused by Chemical Industries	Cincinnati, Ohio	75
6.8-7	Basic Radiological Health Training	Cincinnati, Ohio	77
6.9-7	Radiological Health Indoctrination Course for Supervisory Personnel of State and Local Health Departments	Cincinnati, Ohio	79
6.10-7	Basic Course in Radiological Health Instrumentation	Cincinnati, Ohio	81
BASIC PROGRAMS			
	1.00 to 1.99 - Sanitary Engineering		
	2.00 to 2.99 - Sanitation		
	3.00 to 3.99 - Housing		
	4.00 to 4.99 - Insect and Rodent Control		
	5.00 to 5.99 - Public Health Education Techniques		
	6.00 to 6.99 - Environmental Health Center		
	8.00 to 8.99	See CDC Laboratory Section	
	9.00 to 9.99		
LOCATIONS			
	0 - Special Arrangement	8 - Chamblee, Ga.	
	1 - Atlanta, Ga.	9 - Montgomery, Ala.	
	2 - Bloomington, Ill.	10 - San Francisco, Calif.	
	3 - Columbus, Ga.	11 - Denver, Colo.	
	4 - Topeka, Kans.	12 - Syracuse, N.Y.	
	5 - Albany, Ga.	13 - Amherst, Mass.	
	6 - Buffalo, N.Y.	14 - Pittsburgh, Pa.	
	7 - Cincinnati, Ohio		

Training Program Staff

47

49

TRAINING SERVICES, COMMUNICABLE DISEASE CENTER, ATLANTA, GA.

51

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James H. Crawford, Senior Sanitary Engineer, Assistant Chief

53

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Marshall Walker, Jr., Administrative Assistant

55

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Sidney P. Lanier, Training Officer

Clarence W. Marshall, Entomologist

63

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65

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67

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69

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71

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73

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75

PUBLIC HEALTH INTERNSHIP TRAINING SECTION, ATLANTA, GA.

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77

Assignment to State Health Departments

Elmer L. Hill, Surgeon, Training Officer, New York

79

Ruth Sumner, Scientist, Training Officer, Health Education, New York

Joseph F. O'Brien, Sanitarian, Training Officer, Sanitation, New York

Charles C. Wilson, Training Officer, Health Department Records, Columbia, S.C.

81

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J. N. Wilson, Aquatic Biologist
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TOPEKA FIELD TRAINING CENTER, TOPEKA, KANS.

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G. W. Ferguson, Senior Sanitary Engineer
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W. R. McLean, Sanitarian (R)
Francis Longan, Public Health Engineer
Eugene Reeves, Restaurant Inspector

GENERAL SANITARY ENGINEERING FIELD TRAINING (1.1-2)

TYPE OF TRAINING PROGRAM: Practical field training for graduate engineers

LOCATION: Public Health Training Center, Bloomington, Ill.

TIME: June 18 to September 7, 1951

STAFF: Charles D. Spangler, Sanitary Engineer
Arthur E. Kaye, J. A. Sanitarian (R)
and members of the staffs of the McLean County Health Department, the Illinois State Health Department, and Training Services, CDC

A. OUTLINE OF TRAINING PROGRAM

This 12-week program is designed to give field training in the various phases of public health engineering. It is organized for public health engineers who are engaged in supervisory positions with local health departments, and sanitary engineering personnel of State health departments who are interested in using this type of field training as a refresher course.

These practical assignments are primarily a field training experience where the trainee actually engages in the regular activities of an operating health department, as well as learns the public health engineering aspects of other public works departments in the area.

Arrangements have been made to:

- Participate in the operation of a rapid sand-filtration treatment plant for the municipal water supply

- Participate in the drilling of wells

- Participate in construction of septic tank systems

- Make operating reports on a sewage treatment plant

- Make inspections and reports on several types of garbage disposal

- Work on rodent and insect control programs

- Make food sanitation inspections and surveys

- Inspect and report on milk production and milk processing

- Make housing, premises, and plumbing surveys

- Practice field techniques of health education

- Carry out the standard laboratory techniques necessary to supplement any portion of the program listed above



Trainees receive actual field experience in the operation of municipal water treatment plant.

Obtain brief experience in industrial hygiene, swimming pool sanitation, meat processing, school sanitation, stream pollution, and sanitary surveys

Adequate laboratory, construction, and operational equipment, and projection and transportation facilities are available.

The trainees are divided into groups of two or three men and these teams rotate during 8 weeks of field practice. The trainees are changed from team to team so that they have an opportunity to learn from each other. The teams are given specific daily assignments in the various activities.

Extensive use is made of training aids such as filmstrips, motion pictures, and demonstrations to supplement the field work. The trainee runs laboratory tests connected with various phases of the training and is instructed in the theory and interpretation of the tests.

B. ENTRANCE REQUIREMENTS

This program is offered for engineering graduates who have had a satisfactory background in environmental sanitation and are recommended for training by a State health officer, an appropriate Federal official, or the dean of an accredited school of engineering or public health.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while attending the training program, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Bloomington Public Health Training Center, Bloomington, Ill.; to the Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Building, Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

GENERAL SANITARY ENGINEERING FIELD TRAINING (1.2-3)

TYPE OF TRAINING PROGRAM: Practical field training for graduate engineers

LOCATION: Public Health Training Center, Columbus, Ga.

TIME: June 18 to September 7, 1951
September 24 to December 14, 1951

STAFF: Richard F. Clapp, Sanitarian
David E. Barry, J. A. Sanitary Engineer (R)
Joseph P. Blanks, J. A. Sanitary Engineer (R)
and other members of the staff of the Columbus Public Health Training Center, Columbus-Muscogee County Health Department, members of the staffs of the Columbus Water Department, the Albany Field Training Center, the Crisp County Health Department, and the Training Services, CDC

A. OUTLINE OF TRAINING PROGRAM

The program covers a 12-week period, giving field training in many phases of public health engineering. Although this program is designed for public health engineers who are engaged in supervisory positions with local health departments, it is available to sanitary engineering personnel of State health departments who will derive benefit from this type of field training.

These practical assignments are primarily a field training experience where the trainee actually engages in the regular activities of an operating health department, as well as learns the public health engineering aspects of other public works departments in the area.

Arrangements have been made to:

Participate in the operation of a rapid sand-filtration treatment plant for the municipal water supply

Participate in the drilling of wells

Participate in construction of septic tank systems

Make operating reports on a sewage treatment plant

Make inspections and reports on several types of garbage disposal

Work on rodent and insect control programs

Make food sanitation inspections and surveys



Trainees collect industrial waste samples for study.

Inspect and report on milk production and milk processing

Make housing, premises, and plumbing surveys

Practice field techniques of health education

Carry out the standard laboratory techniques necessary to supplement any portion of the program listed above

Brief experience in industrial hygiene, swimming pool sanitation, meat processing, school sanitation, stream pollution, and sanitary surveys

Adequate laboratory, construction, and operational equipment, and projection and transportation facilities are available.

The trainees are divided into groups of two or three men and these teams rotate during 8 weeks of field practice. The trainees are changed from team to team so that they have an opportunity to learn from each other. The teams are given specific daily assignments in the various activities. A variety of large and small municipal water and sewage treatment plants are available. Over two hundred food-handling establishments, approximately eighty producing dairy farms, one holding type pasteurization plant, and one high-temperature, short-time pasteurization plant are available for food and milk sanitation field practice. Three sanitary land fills and one incinerator, six swimming pools of various types, and operating programs in insect and rodent control, well drilling, and septic tank and privy construction also are available.

Extensive use is made of training aids such as filmstrips, motion pictures, and demonstrations to supplement the field work. The trainee runs laboratory tests connected with various phases of the training and is instructed in the theory and interpretation of the tests.

Excellent cooperation is given by the Columbus-Muscogee County Health Department in the conduct of the training program. The sanitation program of the health department represents an annual expenditure of approximately \$115,500 for an estimated population in Muscogee County of 96,000 including the city of Columbus which has a population of 57,000.

B. ENTRANCE REQUIREMENTS

This program is offered for engineering graduates who have had a satisfactory background in environmental sanitation and are recommended for training by a State health officer, an appropriate Federal official, or the dean of an accredited school of engineering or public health.

No tuition is charged but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers. Rooms for single men are readily available, although desirable apartments for families are difficult to obtain.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Columbus Public Health Training Station, Columbus, Ga.; to the Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

SANITARY ENGINEERING FIELD TRAINING FOR PUBLIC HEALTH SERVICE REGULAR CORPS OFFICERS (1.3-3,0)

TYPE OF TRAINING PROGRAM: Practical field training for graduate engineers followed by additional supervised field experience in State and local health departments

LOCATION: Public Health Training Center, Columbus, Ga., and selected State and local health departments

TIME: Three-year training program to be arranged

STAFF: Columbus Public Health Training Center:
Members of the staff of the Columbus Public Health Training Center
Members of the staffs of the Columbus Water Department, the Albany Field Training Center, and the Training Services, CDC
Members of the staffs of the Divisions of Sanitary Engineering and Sanitation of selected State and local health departments, and all Divisions of the Public Health Service concerned

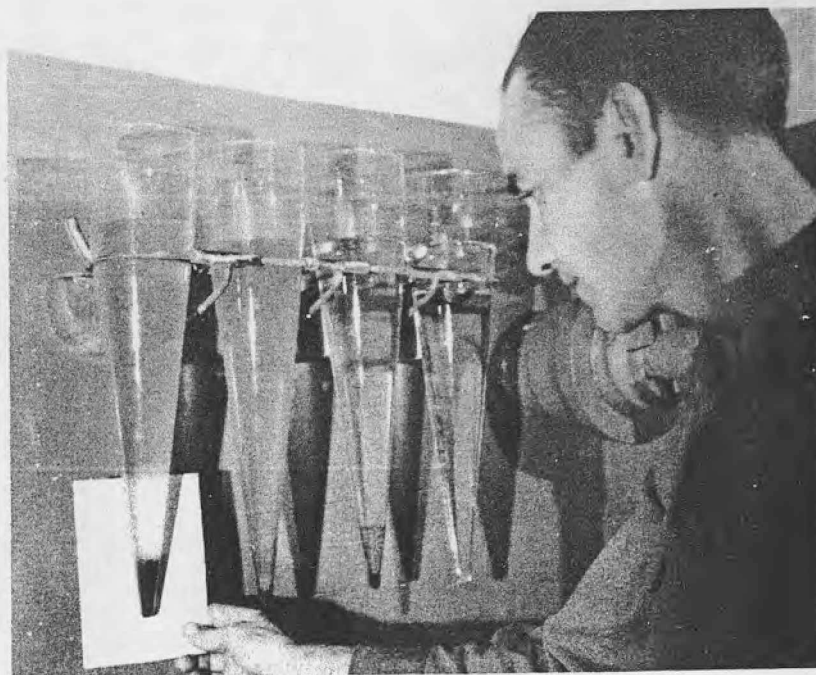
A. OUTLINE OF TRAINING PROGRAM

This 3-year field training program is designed to provide wide field experience in sanitary engineering and environmental sanitation activities for regular corps sanitary engineer officers of the U. S. Public Health Service who have recently completed 1 year of academic instruction leading to a M. P. H. degree or a M. S. degree in sanitary engineering.

The field training is divided as follows:

1. Assignment to the Columbus Public Health Training Station, Columbus, Ga., for a period of 3 months to take the regularly scheduled training program, "General Sanitary Engineering Field Training."

2. Assignment for further field training to selected local and State health departments is under the direction of the Division of Commissioned Officers



Trainees receive demonstration in use of Imhoff cones.

and the Division of Sanitation of the U. S. Public Health Service.

For further information concerning the content of the 3-month training program at the Columbus Public Health Training Center, see the description of the course, "General Sanitary Engineering Field Training (1.2-3)," in this bulletin.

At the completion of training at the Columbus Field Training Center, all trainees are under the direction of the Division of Commissioned Officers and the Division of Sanitation of the Public Health Service. They are assigned to selected local and State health departments where they receive supervised experience in the various sanitary engineering activities of these departments. Through this medium, the trainee receives sufficient practical experience to have a thorough working knowledge of both local and State health department activities.

The remainder of the 3-year training program consists of assignments in various regional offices and headquarters units of the U. S. Public Health Service.

B. ENTRANCE REQUIREMENTS

This 3-year training program is designed for regular corps sanitary engineering officers who recently have completed the academic instruction indicated previously. During this period of training, the officer is assigned on full-pay status; cost of all travel from station to station on change of field training assignment is paid by the Government.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

This field training is arranged for each officer undertaking graduate academic training as part of his training in the Public Health Service. Upon application for graduate training, each officer should indicate the particular type of duty for which he desires field training. Insofar as practicable and with consideration of the needs of the Service, the officer's desires in regard to field training is given full consideration. All arrangements for field training are made jointly by the Division of Commissioned Officers, the Division of Sanitation, and the Communicable Disease Center.

ENVIRONMENTAL SANITATION FIELD TRAINING FOR GRADUATE SANITARIANS (2.1-13)

TYPE OF TRAINING PROGRAM: Practical field training for graduate sanitarians

LOCATION: New England Field Training Center, Marshall Hall Annex, University of Massachusetts, Amherst, Mass.

TIME: July 2 to August 24, 1951

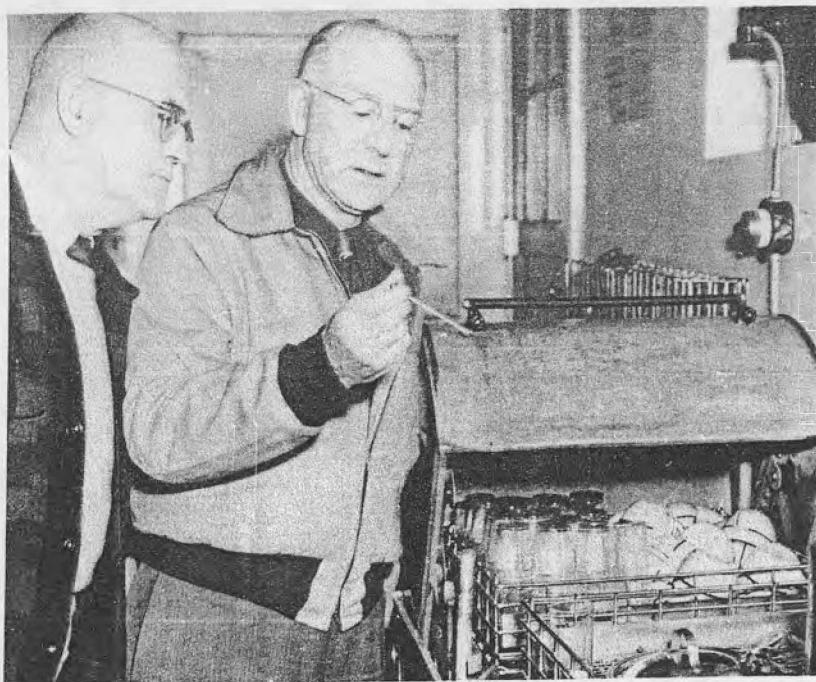
STAFF: Leon A. Bradley, Ph.D., Director
Herbert W. Haas, Sanitary Engineer
Irving H. Schlafman, J. A. Sanitarian (R)
A. A. Robertson, Training Officer, Massachusetts Department of Public Health and certain personnel of the Massachusetts Department of Public Health, the University of Massachusetts, Public Health Service Regional Office, and local health departments

A. OUTLINE OF TRAINING PROGRAM

The training program covers an 8-week period and is planned to give field training in most phases of environmental sanitation to graduate sanitarians of the University of Massachusetts. It is designed to give the trainee field training in the major elements of municipal and rural sanitation.

As the men taking this training course have completed or are completing a course in sanitary science at the University, the major part of the time is given to field work. These men receive field training experience in which the trainee does work similar to what he would do if engaged in the regular activities of a local health department. For those men doing graduate work, a project report is written on the summer's work, for which the trainee receives credit in the University of Massachusetts Graduate School. The field of training covers the following subjects:

- Health Department Organization
- Food Sanitation
- Food Handlers Training Program
- Milk Sanitation



Trainees checking dishwashing machine temperatures.

Public and Private Water Supply
Public and Private Sewage Disposal
Insect and Rodent Control
Swimming Pool and Bathing Beach Sanitation
Camp Sanitation
Sketching and Mapping
Ice Plant Sanitation
Bottled Beverage Plant Sanitation
Refuse Disposal
School Sanitation
Industrial Hygiene
Housing Sanitation

Laboratory facilities of the University of Massachusetts are available for use in connection with the above program and adequate operational equipment and transportation are furnished.

The trainees are divided into teams of from two to four men, and these teams are rotated during the field work so that adequate and intimate supervision can be given to all men. The facilities of over 20 towns and cities varying in population from a few hundred to over 150,000 within a radius of 25 miles of Amherst are used, and these provide a variety of water and sewage plants, private and semipublic water supplies and sewage disposal systems, milk processing plants, dairy farms, restaurants, food processing plants, swimming pools, central and rural schools, and many other facilities.

B. ENTRANCE REQUIREMENTS

This course is offered to graduate sanitarians of the University of Massachusetts.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers. Rooms for single men are readily available, although desirable apartments for families are difficult to obtain.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be sent to the New England Field Training Center, Marshall Hall Annex, University of Massachusetts, Amherst, Mass.; or to the Training Services, Communicable Disease Center, Public Health Service, 605 Volunteer Building, Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each applicant should be included in the letter. Health department personnel should make application through the State health officer.

Due to physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

ENVIRONMENTAL SANITATION FIELD TRAINING (2.2-13)

TYPE OF TRAINING PROGRAM: Practical field training for sanitation personnel

LOCATION: New England Field Training Center, Marshall Hall Annex, University of Massachusetts, Amherst, Mass.

TIME: February 26 to May 18, 1951
September 24 to December 14, 1951

STAFF: Leon A. Bradley, Ph.D., Director
Herbert W. Haas, Sanitary Engineer
Irving H. Schlafman, J. A. Sanitarian (R)
A. A. Robertson, Training Officer, Massachusetts Department of Public Health
and certain personnel of the Massachusetts Department of Public Health, the
University of Massachusetts, Public Health Service Regional Office, and
local health departments

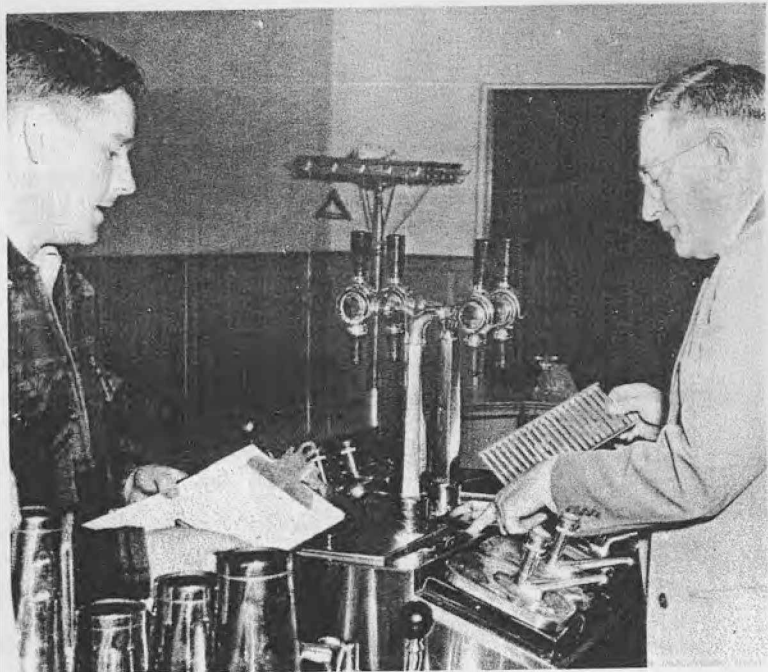
A. OUTLINE OF TRAINING PROGRAM

Each of the training courses covers a 12-week period, and is designed to give the trainee a practical working knowledge of the field of environmental sanitation and of a sanitarian's duties.

Approximately half of the time is allowed for classroom discussion of public health principles, and the remainder of the time the trainees are in the field observing and making inspections, usually engaged in by health departments.

The first 2 weeks of fundamental background include elementary bacteriology, elementary chemistry, communicable diseases, public health organization, public relations, and public health education. During the next 2 weeks, the trainees hear discussions on, and receive field experience in the inspection of public and private water

supplies and sewage disposal systems, swimming pool sanitation, and garbage collection and disposal. The fifth week a variety of subjects is covered, including school sanitation, housing, concrete construction, nuisances, mathematics as related to the work of the sanitarian, and industrial hygiene. Insect and rodent control is covered in the sixth week. The subject is discussed and the trainees participate in field demonstrations on poisoning and trapping of rodents, larviciding for mosquito control, and residual spray operations. The following 4 weeks are devoted to food and milk sanitation.



Trainees making an inspection of a soda fountain.

This includes discussions of public health principles involved, equipment and methods, and inspection procedures, followed by field inspections of restaurants, dairy farms, milk processing plants, bakeries, food processing plants, and other plants. During the period, process and producer milk samples are collected and tests run on the samples in the laboratory by the trainees, followed by an inspection of the farm or plant involved in order to correlate laboratory findings with the field inspections.

At the close of the weeks devoted to milk and food, round-table discussions are held to clarify any points that the trainees may have. During the last 2 weeks of the course the trainees make a sanitary survey of a small community and undertake a resort sanitation survey. Since this requires a knowledge and use of the principles of environmental sanitation, it serves as both a review and as practical application of these principles.

Guest lecturers from the Massachusetts State Department of Public Health and the University of Massachusetts participate in presenting lectures. Laboratory facilities of the University are used in the examination of samples collected during the course.

B. ENTRANCE REQUIREMENTS

This program is offered to any person actively engaged in environmental sanitation work. The course is given primarily for residents of the New England States.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers. Rooms for single men are readily available, although desirable apartments for families are difficult to obtain.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Application blanks may be obtained from and applications submitted through the sponsoring agency to the Federal Security Agency Region I, Public Health Service, 120 Boylston Street, Boston 16, Mass.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

ENVIRONMENTAL SANITATION FIELD TRAINING (2.3-2)

TYPE OF TRAINING PROGRAM: Practical field training for sanitarians

LOCATION: Public Health Training Center, Bloomington, Ill.

TIME: February 26 to May 18, 1951
September 17 to December 7, 1951

STAFF: Charles D. Spangler, Sanitary Engineer
Arthur E. Kaye, J. A. Sanitarian (R)
and members of the staffs of the McLean County Health Department, the Illinois State Health Department, and Training Services, CDC

A. OUTLINE OF TRAINING PROGRAM

These programs cover a 12-week period and are organized to give field training in all phases of environmental sanitation. They are designed for sanitarians who will do general sanitation in a city or county health department. The courses are intended for new men in the field of public health sanitation and are flexible enough to be valuable for men who have had experience in one or two fields and who now desire to broaden the scope of their activities. They are also excellent refresher courses to bring men up to date on the latest information in various activities.

These programs offer principally a field training experience where the trainee actually engages in the regular activities of an operating health department. Practical assignments in all of the usual activities of sanitarians in city-county health units are made and include field experience in the following:

- Urban and rural water supplies
- Urban and rural sewage disposal
- Garbage collection and disposal
- School and recreational area sanitation
- Private premises sanitation
- Housing and plumbing
- Food-handling sanitation
- Milk sanitation
- Bathing area sanitation



Trainee taking water sample from protected spring.

Sanitary surveys
Insect and rodent control
Laboratory and field tests and their interpretation
Health education techniques
Record keeping and report writing
Adequate laboratory, construction, and operational equipment, and projection and transportation facilities are available.

The trainees are divided into groups of two or three men for field practice assignments. Each group carries out field activities under the general supervision of a field training instructor. More experienced sanitarian trainees are given special field practice assignments to work out on their own initiative.

Extensive use is made of training aids such as filmstrips, motion pictures, and demonstrations to supplement the field work. The trainee runs laboratory tests connected with various phases of the training and is instructed in the theory and interpretation of the tests.

B. ENTRANCE REQUIREMENTS

These programs are offered to any person who has, or who can meet, the merit system requirements for some type of sanitation position in the State he represents.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Bloomington Public Health Training Center, Bloomington, Ill.; to the Training Services, Communicable Diseases Center, U. S. Public Health Service, 605 Volunteer Building, Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

ENVIRONMENTAL SANITATION FIELD TRAINING (2.4-6)

TYPE OF TRAINING PROGRAM: Practical field training for sanitary inspector personnel

LOCATION: New York Field Training Center, Buffalo, N.Y.

TIME: January 2 to March 24, 1951
April 9 to June 20, 1951
September 10 to December 1, 1951

STAFF: Joseph L. Minkin, S.A. Sanitarian
and other members of the staff of the New York Field Training Center; also,
members of the staff of the U. S. Public Health Service Region II Office

A. OUTLINE OF TRAINING PROGRAM

This 12-week course in environmental sanitation is organized to give the trainee a working knowledge of the major elements in municipal and rural sanitation and their relation to sanitary inspectors' work.

The first 2 weeks of fundamental background include elementary bacteriology, communicable diseases, public health organization and administration, and public health education. The next 2 weeks are devoted to discussion and field experience in water and sewage, swimming pool sanitation, and school sanitation. The fifth week covers concrete construction and mathematics pertaining to a sanitary inspector's work and to nuisances, garbage collection and disposal, and industrial hygiene. During the sixth week, insect and rodent control is discussed, and trainees participate in field demonstrations.

The following 4 weeks (seventh through tenth) are devoted to milk and food sanitation. Food and milk ordinances, restaurants, dairy farms, pasteurization plants, and laboratory and field tests of food and milk and their interpretation are discussed during the first 1½ weeks. The trainees then are taken out in small groups accompanied by various instructors to inspect restaurants, farms, and dairy plants. During the latter part of this 4-week period, the trainees inspect these various activities alone, and collect samples on which they run field tests and simple laboratory tests. The last 2 days of the period are used for participation by the students in a round-table discussion on milk and food.

During the last 2 weeks of the course, the trainees make a sanitary survey of a small community and undertake a resort sanitation survey. As this requires a knowledge and use of most of the principles



Sanitary inspectors receive practical instruction in the production of clean and safe milk supplies.

of environmental sanitation, it serves both as a review and as a practical application of the subject.

During the course, over twenty guest lecturers who are among the leaders in their fields participate in the discussions and demonstrations.

The station uses the laboratory facilities of the county health department in the examination of samples collected during their field inspections. Extensive use is made of audio-visual aids and demonstration equipment.

B. ENTRANCE REQUIREMENTS

This program is offered to any person who has, or who can meet, the merit system requirements for some type of sanitary inspector position in the State he represents. The trainees should have at least a high school education and 2 years of experience in similar health department activities to obtain the maximum benefit from this field training program. College-trained applicants are given preference for this program.

No tuition is charged, but trainees are expected to arrange for their own living and travel expenses while in attendance, either through State stipend, their own personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the New York Field Training Center, Buffalo, N.Y.; to the Training Services, Communicable Disease Center, U.S. Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

ENVIRONMENTAL SANITATION FIELD TRAINING (2.5-3)

TYPE OF TRAINING PROGRAM: Practical field training for sanitarians

LOCATION: Columbus Field Training Center, Columbus, Ga.

TIME: February 5 to April 27, 1951

STAFF: Richard F. Clapp, Sanitarian
David E. Barry, J. A. Sanitary Engineer (R)
Joseph P. Blanks, J. A. Sanitary Engineer (R)
and other members of the staff of the Columbus Public Health Training Center, Columbus-Muscogee County Health Department, members of the staffs of the Columbus Water Department, the Albany Field Training Center, the Crisp County Health Department, and the Training Services of CDC

A. OUTLINE OF TRAINING PROGRAM

The program covers a 12-week period, giving field training in all phases of environmental sanitation. The program is designed for sanitarians who do general sanitation in a city or county health department. This course is intended for new men in the field of public health sanitation and is flexible enough to be valuable for men who have had experience in one or two fields and who now desire to broaden the scope of their activities. This is also an excellent refresher course to bring men up to date on the latest information in various activities.

This program offers principally a field training experience where the trainee actually engages in the regular activities of an operating health department. Practical assignments in all of the usual

activities of sanitarians in city-county health units are made and include field experience in the following:

- Urban and rural water supplies
- Urban and rural sewage disposal
- Garbage collection and disposal
- School and recreational area sanitation
- Private premises sanitation
- Housing and plumbing
- Food-handling sanitation



Operation of well drilling equipment is practiced and studied in the field.

Milk sanitation
Bathing area sanitation
Sanitary surveys
Insect and rodent control
Laboratory and field tests and their interpretation
Health education techniques
Record keeping and report writing
Adequate laboratory, construction, and operational equipment, and projection and transportation facilities are available.

The trainees are divided into groups of two or three men for field practice assignments. Each group carries out field activities under the general supervision of a field training instructor. More experienced sanitarian trainees are given special field practice assignments to work out on their own initiative. A variety of large and small municipal water and sewage treatment plants are available. More than two hundred food-handling establishments, approximately eighty producing dairy farms, one holding type pasteurization plant, and one high-temperature, short-time pasteurization plant are available for food and milk sanitation field practice. Three sanitary land fills and one incinerator, six swimming pools of various types, and operating programs in insect and rodent control, well drilling, and septic tank and privy construction also are available.

Extensive use is made of training aids such as filmstrips, motion pictures, and demonstrations to supplement the field work. The trainee runs laboratory tests connected with various phases of the training and is instructed in the theory and interpretation of the tests.

Excellent cooperation is given by the Columbus-Muscogee County Health Department in the conduct of the training program. The sanitation program of the health department represents an annual expenditure of approximately \$115,000 for an estimated population in Muscogee County of 96,000 including the city of Columbus which has a population of 57,000.

B. ENTRANCE REQUIREMENTS

This program is offered to any person who has, or who can meet, the merit system requirements for some type of sanitation position in the State he represents.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers. Rooms for single men are readily available, although desirable apartments for families are difficult to obtain.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Columbus Field Training Center, Columbus, Ga.; to the Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

ENVIRONMENTAL SANITATION FIELD TRAINING (2.6-11)

TYPE OF TRAINING PROGRAM: Practical field training for sanitarians

LOCATION: Rocky Mountain Field Training Center, University of Colorado Medical Center, 4200 E. Ninth Ave., Denver, Colo.

TIME: January 8 to March 30, 1951

STAFF: Clyde F. Herring, Training Officer
Howard M. Weindel, Training Officer
and other members of the staffs of the Denver City-County Health Department, the Colorado State Health Department, University of Colorado Medical Center, and the U. S. Public Health Service Region IX Office

A. OUTLINE OF TRAINING PROGRAM

These 12-week specialized training programs in environmental sanitation are designed to equip the trainee with a working knowledge of an overall program of municipal and county sanitation work. The first 4 weeks of fundamental background information include public health administration, records, bacteriology, public health nursing, and public health education. The remaining 8 weeks include field experience in rural and urban sanitation, rodent and insect control, plumbing, meat sanitation, housing, milk sanitation, and sanitation of eating and drinking establishments. During the entire training programs, emphasis is placed on the methods used in handling sanitation problems in the midwestern region of the United States.

Each trainee is given an opportunity to work alone in solving practical problems with guidance and counsel from the training staff. In the past, the planned discussion following each field experience has proved to be a valuable aid in emphasizing fundamental points of public health practice. This work, under close supervision, gives the trainee confidence in himself and an understanding of sanitary practices which fit him to do a better job as a co-worker in a health department.

B. ENTRANCE REQUIREMENTS

These programs are offered to any person actively engaged in environmental sanitation work.

No tuition is charged, but trainees are expected to arrange for their own living and traveling



Trainees making actual installation of septic tank and drainage field.

expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Rocky Mountain Field Training Center, University of Colorado Medical Center, 4200 E. Ninth Ave., Denver, Colo.; to the Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteering Place, Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

ENVIRONMENTAL SANITATION FIELD TRAINING (2.7-14)

TYPE OF TRAINING PROGRAM: Basic training for sanitation personnel

LOCATION: Pittsburgh Field Training Center, Pittsburgh, Pa.

TIME: March 19 to June 9, 1951
September 10 to December 1, 1951

STAFF: Karl M. Mason, Senior Training Officer
Robert B. Carson, Training Officer
and members of the staffs of the Pennsylvania Department of Health, Pittsburgh Department of Health, U. S. Public Health Service Region II, and the University of Pittsburgh

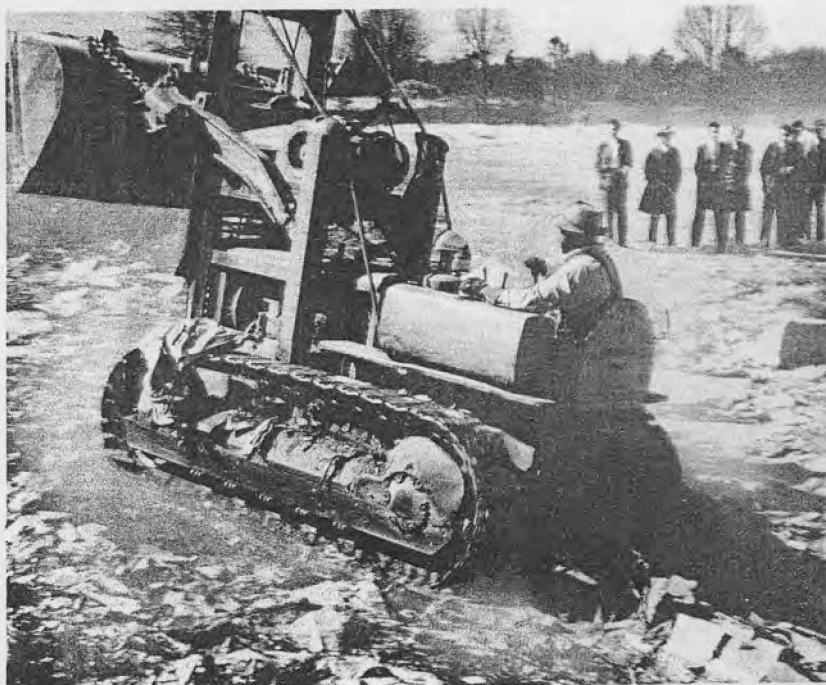
A. OUTLINE OF TRAINING PROGRAM

These 12-week courses in environmental sanitation are designed to give the trainee the fundamentals of the sanitary sciences and public health principles, and to extend his knowledge of other departmental and community health programs.

The first 8 weeks of the course consist of academic instruction, laboratory work, and field observation in the sciences of sanitary bacteriology and chemistry, communicable disease control, radiological health, water supply, sewage disposal, food and milk control, swimming pools, school sanitation, industrial hygiene, insect and rodent control, refuse and garbage disposal, housing and community planning, camp and recreational areas, nuisance control, public health organization and administration, health education, human relations, public health law, report writing, public speaking, and program planning and evaluation.

The remaining 4 weeks are utilized in actual field application of the above public health practices under the guidance of the Training Center staff and consultants from cooperating agencies. Field experiences in municipal, suburban, and rural areas are available in accordance with the individual needs of each trainee.

It is planned that these basic courses in environmental sanitation will constitute a preliminary phase of training in preparation for a similar period of supervised field training with an operating health unit. For those sanitarians who can continue their training, various types of health departments cooperating with the Training Center offer an opportunity of apprenticeship for the trainee under the supervision of the department staff.



Trainees observe sanitary land fill operations.

B. ENTRANCE REQUIREMENTS

These programs are offered to any person who is engaged full time in environmental sanitation work. *No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.*

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Pittsburgh Field Training Center, Pittsburgh, Pa.; to the Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Building, Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees. Applications, therefore, should be submitted as early as possible in advance of the beginning date of the course.

ENVIRONMENTAL SANITATION FIELD TRAINING (2.8-4)

TYPE OF TRAINING PROGRAM: Practical field training in environmental sanitation

LOCATION: Topeka Field Training Center, Room 512 Central Building, 700 Kansas Avenue, Topeka, Kans.

TIME: February 19 to May 12, 1951
August 27 to November 17, 1951

STAFF: T. R. Hood, M.D., Director
Hugh E. Eagan, Training Officer
Romaine E. Kiouss, Training Officer
Leo J. Dymerski, Sanitary Engineering Aid (Training Instructor)
and consultants of the staffs of the Topeka City-Shawnee County Health Department, the Kansas State Board of Health, and members of the staffs of the Federal Security Agency, Public Health Service Region VII, and Communicable Disease Center Regional Office

A. OUTLINE OF TRAINING PROGRAM

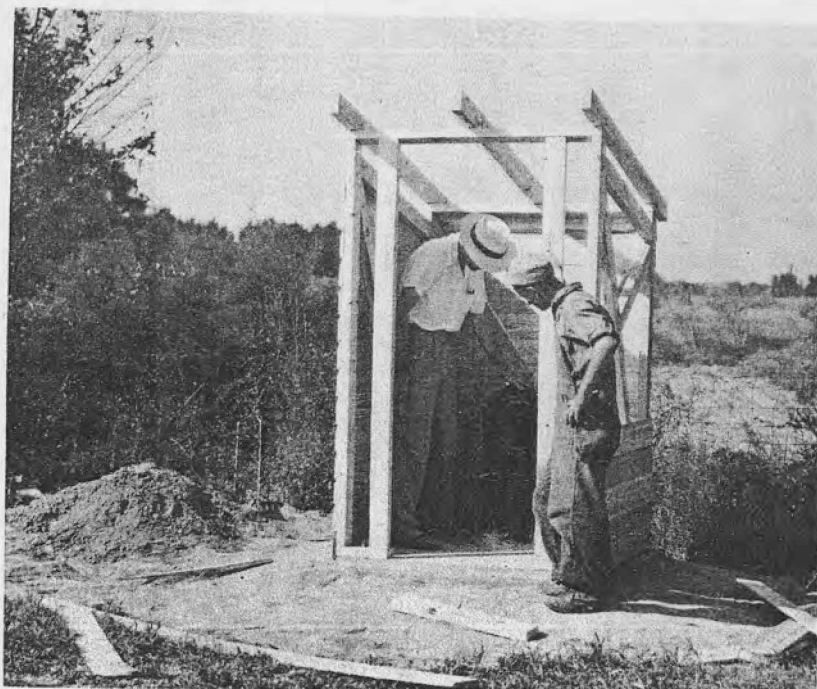
The trainee secures a working knowledge of essential environmental health practices of the over-all program of municipal and county sanitation work.

The practical fundamental background information of public health administration, records, bacteriology, public health nursing and education is integrated with actual experiences.

Field experience in rural and urban sanitation, rodent and insect control, plumbing, housing, rural and municipal water supplies and excreta disposal for sanitarians is offered. Emphasis is placed on milk sanitation, eating and drinking establishment sanitation from an experience program of training. Class work is held in a minimum and consists essentially of discussions. The trainees have found this course helpful as a preparation for State merit system examinations.

B. ENTRANCE REQUIREMENTS

This program is offered to any person recommended by his respective State or territorial health agency.



Trainees receive practical experience in construction of sanitary privy.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and forwarded through the respective Federal Security Agency, Public Health Service Regional Office; or to Training Services, Communicable Disease Center, 605 Volunteer Building, Atlanta, Ga.

All applications will clear through the Public Health Service Region VII, 2200 Fidelity Building, 911 Walnut Street, Kansas City, Mo.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

SPECIAL TRAINING PROGRAMS IN MILK PLANT SANITATION

(2.9-3)

TYPE OF TRAINING PROGRAM: Comprehensive field training in milk plant sanitation

LOCATION: Columbus Field Training Center, Columbus, Ga.

TIME: January 15-19, 1951 March 12-16, 1951
January 22-26, 1951 May 7-11, 1951
February 12-16, 1951 May 14-18, 1951

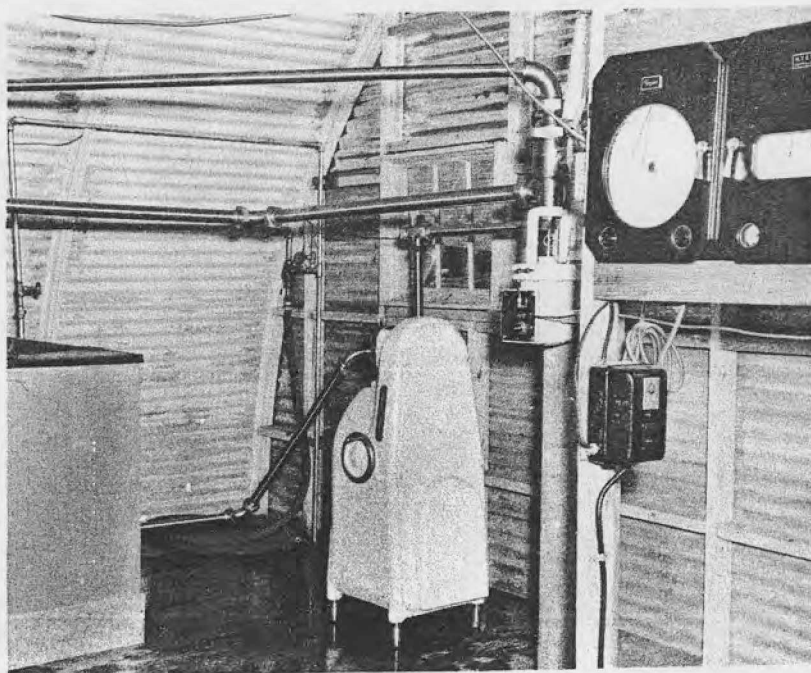
Two additional milk plant sanitation courses will be given in both summer and fall quarters - the exact dates to be announced

STAFF: Richard F. Clapp, Sanitarian
David E. Barry, J. A. Sanitary Engineer (R)
Joseph P. Blanks, J. A. Sanitary Engineer (R)
and other members of the staffs of the Columbus Field Training Center and the Columbus-Muscogee County Health Department

A. OUTLINE OF TRAINING PROGRAM

These 1-week training courses are designed to provide an intensive course in milk plant sanitation for State and local health department personnel with particular interest in milk sanitation. Emphasis is placed, insofar as possible, on active participation by the trainee in the operation and instrumentation of a working demonstration pasteurization unit for both holding and high-temperature, short-time processing, in conducting all laboratory procedures commonly applied in milk sanitation control, and in milk production sanitation practices. Class work is held to a minimum and consists essentially of discussions rather than lectures.

At the two milk plants in Columbus, both holding and high-temperature, short-time pasteurization are observed, as well as the manufacture of dairy products and the operating of newly installed plant equipment.



Thorough instruction in pasteurization plant instruments is conducted with operating equipment.

B. ENTRANCE REQUIREMENTS

This program is offered to any person who has, or who can meet, the merit system requirements for

a sanitation position in the State he represents.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers. Rooms for single men are readily available, although desirable apartments for families are difficult to obtain.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Columbus Field Training Center, Columbus, Ga.; to the Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

SPECIAL TRAINING PROGRAM IN MILK AND RESTAURANT SANITATION (2.10-11)

TYPE OF TRAINING PROGRAM: Special training program in milk and restaurant sanitation

LOCATION: Rocky Mountain Field Training Center, University of Colorado Medical Center, 4200 E. Ninth Ave., Denver, Colo.

TIME: October 15-26, 1951

STAFF: Clyde F. Herring, Training Officer
Howard M. Weindel, Training Officer
and other members of the staffs of the Denver City-County Health Department, the Colorado State Health Department, University of Colorado Medical Center, and the U. S. Public Health Service Region IX Office

A. OUTLINE OF TRAINING PROGRAM

This 2-week training period is designed to assist industry personnel and the personnel of local and State health departments in the technical aspects of milk and food sanitation. Emphasis is placed on the demonstration of physical and chemical tests and in familiarizing the trainee with the engineering design and operation of dairy, milk plant, and restaurant equipment. Active participation by the trainee in field work as well as in the panel discussions is expected.

B. ENTRANCE REQUIREMENTS

This program is offered to any person actively engaged in public health or industrial sanitation work. *No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.*

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Rocky



Trainees observing design of various types of restaurant equipment.

Mountain Field Training Center, 4200 E. Ninth Ave., Denver, Colo.; to the Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

SPECIAL TRAINING PROGRAM IN MILK SANITATION (2.11-14)

TYPE OF TRAINING PROGRAM: Special training in milk sanitation

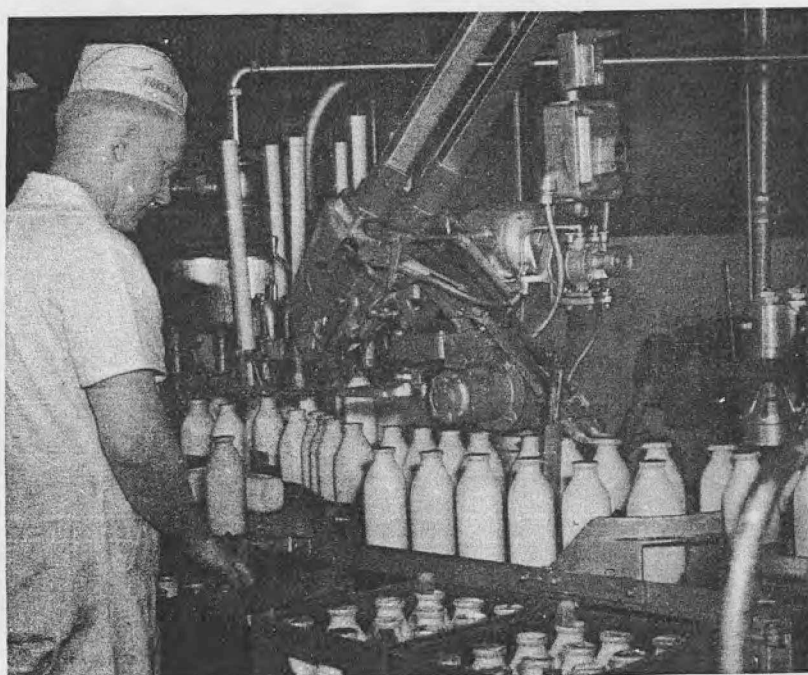
LOCATION: Pittsburgh Field Training Center, Pittsburgh, Pa.

TIME: Tentatively scheduled for 2 weeks during summer months, dates to be announced

STAFF: Karl M. Mason, Senior Training Officer
Robert B. Carson, Training Officer
and members of the staffs of the Pennsylvania Department of Health, Pittsburgh Department of Health, U. S. Public Health Service Region II, and Pennsylvania State College

A. OUTLINE OF TRAINING PROGRAM

This 2-week training course in milk sanitation is designed primarily for those sanitarians who have received previous training in environmental sanitation or have had substantial experience in milk control work. Emphasis is placed on the physical, chemical, and bacteriological tests employed in milk sanitation programs, and the engineering design and operation of dairy farm and milk plant equipment. Laboratory facilities and demonstration equipment, as well as field work at dairy farms and milk plants in the area, enable the trainee to participate actively in the program.



B. ENTRANCE REQUIREMENTS

The course is offered to any person who is engaged full time in environmental sanitation work.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

Trainees receive intensive training with milk plant equipment.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Pittsburgh Field Training Center, School of Public Health, University of Pittsburgh, Pittsburgh, Pa.; to the

Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Building Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees. Applications, therefore, should be submitted as early as possible in advance of the beginning date of the course.

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SPECIAL TRAINING PROGRAM IN RESTAURANT SANITATION (2.12-14)

TYPE OF TRAINING PROGRAM: Special training in restaurant sanitation

LOCATION: Pittsburgh Field Training Center, Pittsburgh, Pa.

TIME: February 5-10, 1951

STAFF: Karl M. Mason, Senior Training Officer
Robert B. Carson, Training Officer
and members of the staffs of the Pennsylvania Department of Health, Pittsburgh Department of Health, U. S. Public Health Service Region II, and the University of Pittsburgh

A. OUTLINE OF TRAINING PROGRAM

This 1-week training course in restaurant sanitation is designed primarily for those sanitarians who have received previous training in environmental sanitation or have had substantial experience in restaurant work. Emphasis is placed on the physical, chemical, and bacteriological tests employed in food sanitation programs, and the engineering design and operation of restaurant equipment. Laboratory facilities and demonstration equipment at the Training Center, as well as field work in various types of restaurants in the area, enable the trainee to participate actively in the program.

B. ENTRANCE REQUIREMENTS

The course is offered to any person who is engaged full time in environmental sanitation work.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Pittsburgh



Trainees receive thorough instruction in storage procedure of perishable foods.

Field Training Center, School of Public Health, University of Pittsburgh, Pittsburgh, Pa.; to Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Building, Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees. Applications, therefore, should be submitted as early as possible in advance of the beginning date of the course.

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SPECIAL TRAINING PROGRAM IN MILK AND RESTAURANT SANITATION (2.13-4)

TYPE OF TRAINING PROGRAM: Special training programs in milk and restaurant sanitation

LOCATION: Topeka Field Training Center, Room 512 Central Building, 700 Kansas Avenue, Topeka, Kans.

TIME: Milk Sanitation
January 15-27, 1951
Restaurant Sanitation
May 28 to June 9, 1951

STAFF: T. R. Hood, M.D., Director
Hugh E. Eagan, Senior Training Officer
Romaine E. Kiouss, Training Officer
Leo J. Symerski, Sanitary Engineering Aid (Training Instructor)
and other members of the staffs of the Topeka City-Shawnee County Health Department and the Kansas State Board of Health; also, members of the staff of the U. S. Public Health Service Region VII Office and invited authorities on specialized subjects

A. OUTLINE OF TRAINING PROGRAM

The 2-week training program in milk sanitation is based on the Public Health Service recommended Milk Ordinance and Code. A seminar is held on the interpretation of the Ordinance. Emphasis is placed on the manipulation of physical and chemical tests. The trainee is familiarized with the engineering design and operation of the dairy and the milk plant. Active participation in the field work as well as in the panel discussions is expected of the trainee.

Physical equipment including a high-temperature, short-time demonstration panel is provided for the study of thermometric and electronic controls.

The first week is devoted to farm problems and enforcement procedures as set forth in the Ordinance and Code. The second week is spent on the subject of milk pasteurization plant



Trainee making swab test of drinking glass.

design and operation.

Personnel of local and State health departments and quality personnel from industry interested in the technical public health aspects of milk control should benefit by attending the course.

The 2-week period in restaurant sanitation deals with the technical aspects of restaurant sanitation. The Public Health Service recommended Eating and Drinking Establishment Ordinance and Code is used as a basis for development. The Ordinance and Code is studied in seminar form, with practical field problems of inspection followed by discussion. Restaurant equipment is provided for demonstration and manipulation. Physical and chemical tests are demonstrated and used in the field.

B. ENTRANCE REQUIREMENTS

These programs are offered to any person actively engaged in public health or industrial sanitation work.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Topeka Field Training Center, Room 512 Central Building, 700 Kansas Avenue, Topeka, Kans.; to the Training Services Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Building, Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

TOPICAL SHORT COURSES (2.14-13)

TYPE OF TRAINING COURSE: One-week courses in special fields

LOCATION: New England Field Training Center, Marshall Hall Annex, University of Massachusetts, Amherst, Mass.

TIME: February 5-9, Milk-Laboratory Procedures
April 2-6, Water and Sewage Laboratory Procedures
April 23-27, Rodent Control (Decentralized)
June 18-22, Fly and Other Insect Control (Decentralized)
September 10-14, Milk Plant Sanitation

STAFF: Leon A. Bradley, Ph.D., Director
Herbert W. Haas, Sanitary Engineer
Irving H. Schlafman, J. A. Sanitarian
A. A. Robertson, Training Officer, Massachusetts Department of Public Health
and certain members of the University of Massachusetts and the Massachusetts State Department of Public Health

A. OUTLINE OF TRAINING PROGRAM

These courses are designed to give training in one particular phase of sanitation to those State and local health department personnel as may be interested. Student participation in field assignments and laboratory work is emphasized as far as practical. The laboratory facilities of the University of Massachusetts are utilized.

Because of better facilities in other parts of Massachusetts, it is expected that the Rodent Control Course and the Insect Control Course will not be held in Amherst. The exact location will be announced at a later date.

B. ENTRANCE REQUIREMENTS

These programs are offered to employees of State and local health departments.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.



Instruction of trainees in laboratory media preparation.

C. APPLICATIONS

Application blanks may be obtained from and applications submitted through the sponsoring agency to Federal Security Agency Region I, Public Health Service, 120 Boylston Street, Boston 16, Mass.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

FIELD SURVEY AND EVALUATION METHODS

IN HOUSING SANITATION (3.1-1) (3.1-) (3.1-12)

TYPE OF TRAINING PROGRAM: Field and office training in the "Appraisal Method for Measuring the Quality of Housing" for supervisory health department personnel, public housing officials, and others interested in the use of this technique

LOCATION: Training Services, Communicable Disease Center, 165 Luckie St., N.W., Atlanta, Ga. and the City of Atlanta Health Department
Syracuse Training Center, City Health Department, City Hall, Syracuse, N.Y.

PACIFIC WEST COAST
Exact location to be announced later

TIME:	ATLANTA TRAINING CENTER	SYRACUSE TRAINING CENTER
	January 8 to February 10, 1951	February 19 to March 24, 1951
	March 19 to April 21, 1951	April 30 to June 2, 1951
	June 4 to July 7, 1951	July 16 to August 18, 1951
	August 20 to September 22, 1951	October 1-31, 1951
	November 4 to December 8, 1951	

PACIFIC WEST COAST
Dates to be announced later

STAFF:	ATLANTA TRAINING CENTER	SYRACUSE TRAINING CENTER
	Ross W. Buck	Emil A. Tiboni
	Engineer	Training Officer
	Herbert H. Rogers	Personnel of City of
	Engineer	Syracuse Health Department
	City of Atlanta Health Department	
	Harold P. Dobbs	
	Robert J. Morris	

PACIFIC WEST COAST
Ross W. Buck
Engineer
Emil A. Tiboni
Training Officer
Herbert H. Rogers
Engineer
Staff of State and local health departments

A. OUTLINE OF TRAINING PROGRAM

The program covers a 5-week period of intensive field and office training in the "Appraisal Method for Measuring the Quality of Housing" as developed by the Committee on the Hygiene of Housing, American Public Health Association. The course is designed to cover all parts of the survey such as field inspections, office processing, selection of areas, and environmental survey. The last week is devoted

to analysis interpretation and preparation of reports.

The 5-week training period enables the trainees to establish the survey in their respective localities and to train their local personnel for essential duties.

The training to be provided on the West Coast is a special 4-week course which covers the same material as outlined above.

B. ENTRANCE REQUIREMENTS

This program is offered for supervisory personnel of State and local health departments, public housing agencies, and city planning commissions. Candidates need not be engineers, but persons recommended should have a background in environmental sanitation, statistics, or city planning. Since part of the training period is spent considering each trainee's local problem, it is important that only personnel well acquainted with their particular areas be considered for enrollment in this program. Certain basic maps of each trainee's local area are required, and information regarding this requirement will be forwarded to him as soon as he is accepted.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

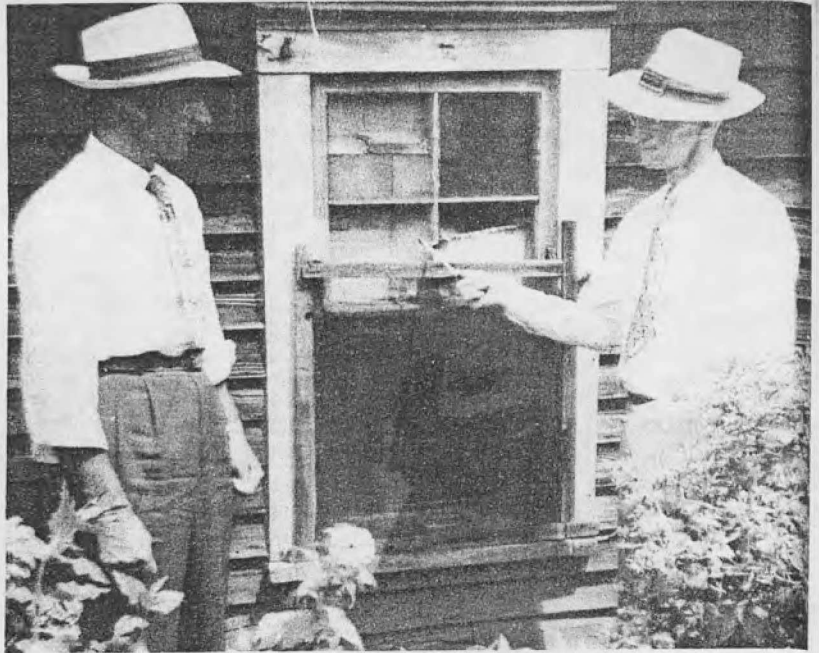
Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Bldg., Atlanta, Ga. or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.



Training officer explaining the extent of dwelling deterioration.

FIELD SURVEY AND EVALUATION METHODS FOR MEASURING QUALITY OF HOUSING ENVIRONMENT (3.2-1) (3.2-12)

TYPE OF TRAINING PROGRAM: Field and office training in the "Appraisal Method for Measuring the Quality of Housing," Environmental Survey only. For supervisory health department personnel, city, county, and metropolitan planning agencies, and others interested in the use of this technique

LOCATION: Training Services, Communicable Disease Center, 165 Luckie St., N.W., Atlanta, Ga. and the City of Atlanta Health Department

Syracuse Training Center, City Health Department, City Hall, Syracuse, N.Y.

TIME: ATLANTA TRAINING CENTER
January 29 to February 2, 1951
April 9-13, 1951
June 25-29, 1951
September 10-15, 1951
November 26-30, 1951

SYRACUSE TRAINING CENTER
March 12-16, 1951
April 21-26, 1951
August 6-10, 1951
October 22-26, 1951

STAFF: ATLANTA TRAINING CENTER
Ross W. Buck
Engineer
Herbert H. Rogers
Engineer
City of Atlanta Health Department
Harold P. Dobbs
Robert J. Morris

SYRACUSE TRAINING CENTER
Emil A. Tiboni
Training Officer
Personnel of City of Syracuse Health Department

A. OUTLINE OF TRAINING PROGRAM

The program covers a 1-week period of intensive field and office training in the environmental survey technique developed by the Committee on the Hygiene of Housing, American Public Health Association. The course is designed to cover only a part of the method known as the "Appraisal Method for Measuring the Quality of Housing." It enables city planning agencies to have trained personnel familiar with and able to evaluate the quality of the environment in which a particular dwelling unit and structure is located.



Training officer describing use of maps in environmental procedures.

B. ENTRANCE REQUIREMENTS

This program is offered for supervisory personnel of State and local health departments and city planning commissions. Candidates need not be engineers, but persons recommended should have a background in environmental sanitation, statistics, or city planning.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

SPECIAL TRAINING PROGRAMS IN HOUSING SANITATION (3.3-1)

TYPE OF TRAINING PROGRAM: Administration of housing program for health departments, for selected Public Health Service, State health department, and planning personnel

LOCATION: To be arranged with local, State health departments through Regional Offices of Public Health Service

TIME: Tentatively scheduled for 1-5 days. Dates to be arranged with State health departments

STAFF: Ross W. Buck Personnel of State and
 Engineer local health departments
 Herbert H. Rogers
 Engineer
 Emil A. Tiboni
 Training Officer

A. OUTLINE OF TRAINING PROGRAM

The program covers a demonstration in field and office procedures on the Housing Sanitation Survey as developed by the Committee on the Hygiene of Housing, American Public Health Association. In addition to the demonstration, items such as costs, personnel requirements, and production estimates are discussed in detail.

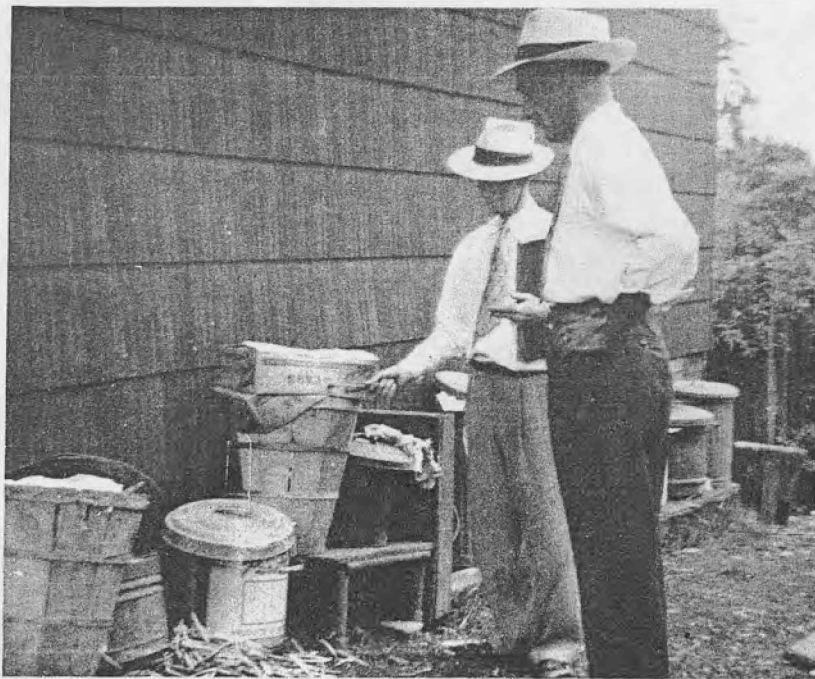
Basic types of housing and relocation laws are discussed. This discussion includes the new Federal laws on slum clearance, low rent housing, and farm housing.

The importance of a cooperative relationship between health departments and city planning commissions in solving health problems in the housing field is emphasized. The course is designed with emphasis placed on the role of the State health department in housing sanitation.

Special programs on housing sanitation at the State level are discussed.

B. ENTRANCE REQUIREMENTS

This program is offered for supervisory personnel of State and local health departments and city planning commissions. Candidates need not be engineers, but persons recommended should have a back-



City sanitarian emphasizing the need for metal refuse containers.

ground in environmental sanitation, statistics, or city planning.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

SPECIAL TRAINING PROGRAM IN HOUSING SANITATION (3.4-11)

TYPE OF TRAINING PROGRAM: Administration of housing program for health departments, for selected Public Health Service and State health department personnel

LOCATION: Rocky Mountain Field Training Center, University of Colorado Medical Center, 4200 E. Ninth Ave., Denver, Colo.

TIME: Tentatively scheduled for March 5-9, 1951

STAFF: Ross W. Buck, Sanitary Engineer
Herbert H. Rogers, J. A. Sanitary Engineer
and other members of the Rocky Mountain Field Training Center

A. OUTLINE OF TRAINING PROGRAM

The program covers a demonstration in field and office procedures on the Housing Sanitation Survey as developed by the Committee on the Hygiene of Housing, American Public Health Association. In addition to the demonstration, items such as costs, personnel requirements, and production estimates are discussed in detail.

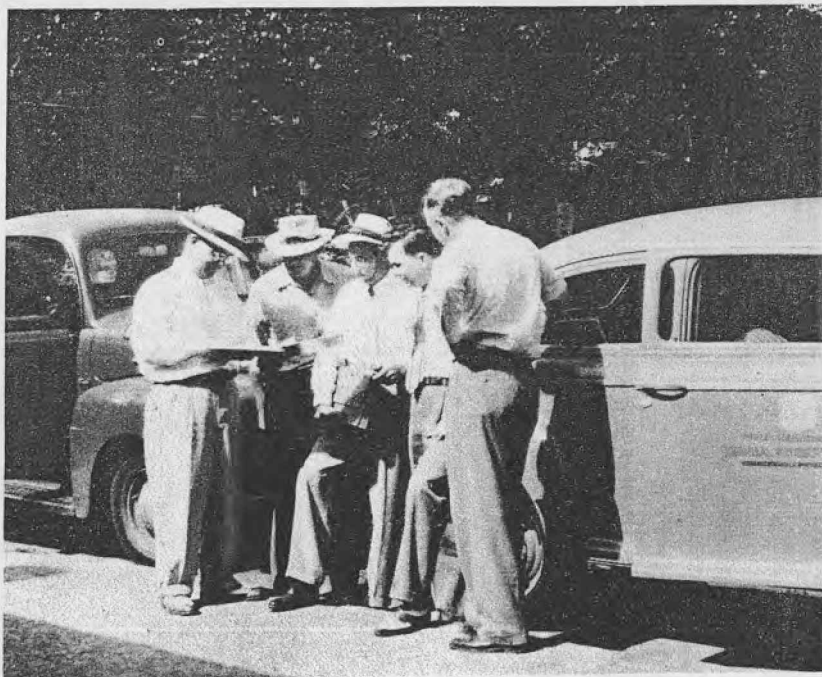
Basic types of housing and relocation laws are discussed. This discussion includes the new Federal laws on slum clearance, low rent housing, and farm housing.

The importance of a cooperative relationship between health departments and city planning commissions in solving health problems in the housing field is emphasized. The course is designed with emphasis placed on the role of the State health department in housing sanitation.

Specific programs on housing sanitation at the State level are discussed.

B. ENTRANCE REQUIREMENTS

This program is offered for supervisory personnel of State and local health departments and city planning commissions. Candidates need not be engineers, but persons recommended should have a back-



Training officer explaining field schedule to housing hygiene trainees.

ground in environmental sanitation, statistics, or city planning.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

RAT-BORNE DISEASE PREVENTION AND CONTROL (4.1-1)

TYPE OF TRAINING PROGRAM: A comprehensive field training program in rat-borne disease prevention and control

LOCATION: Training Services, Communicable Disease Center, 165 Luckie St., N.W., Atlanta, Ga.

TIME: March 12-30, 1951
October 1-19, 1951

STAFF: Clyde F. Fehn, Sanitary Engineer
Alfred R. Kinney, Jr., Training Officer
Kent S. Littig, Entomologist
Sidney P. Lanier, Training Officer
Clarence W. Marshall, Entomologist
and other members of the staffs of the Communicable Disease Center and the City of Atlanta Health Department

A. OUTLINE OF TRAINING PROGRAM

These 3-week comprehensive field training programs include extensive supervised field practice in the principal procedures applicable in the prevention and control of rat-borne diseases. The following subjects are included in these programs:

- Epidemiology of the various rat-borne diseases

- Rat-borne disease surveys

- Habits, characteristics, and identification of the domestic species of rats

- Habits, characteristics, and identification of rat ectoparasites

- Environmental sanitation and rat control

- Techniques of ratproofing existing buildings, including estimating, contracting, and bookkeeping

- Procedures and techniques in the control and eradication of rats

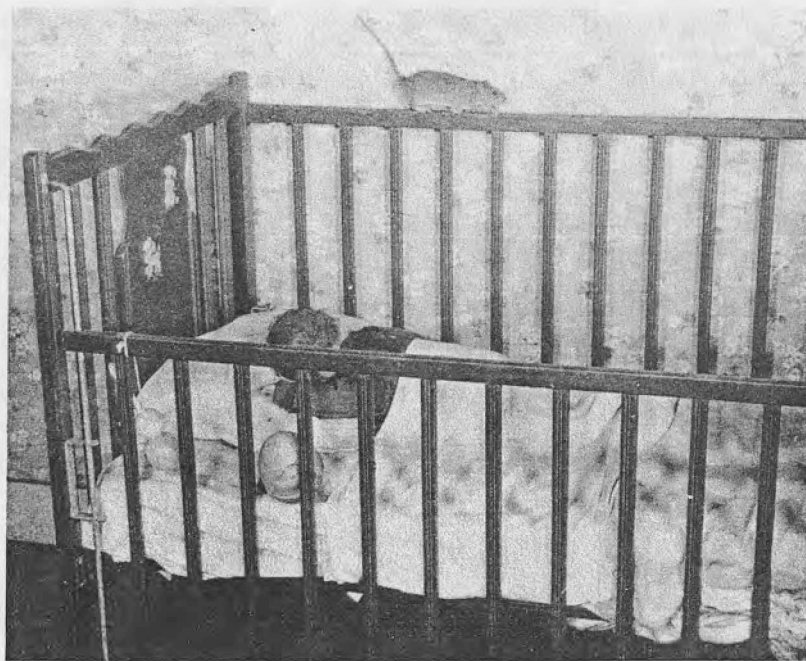
- Ratproof construction of new buildings

- Control of rat ectoparasites

- Evaluation of rat ectoparasite control

- Organization of rat-borne disease prevention and control programs

The comprehensive manual entitled "Rat-borne Disease Prevention and Control" is used as a reference for this course. Copies of this manual are furnished to all trainees for their permanent retention.



This is a scene from the new series of rat control films being produced jointly by the Army and the Public Health Service. These films will be utilized for the first time in the 1951 courses.

This training program develops sound, practical approaches to rat-borne disease problems in accordance with the best current practices. An understanding of the total scope of these problems is provided and their integration with other public health problems is demonstrated. In achieving these objectives emphasis is placed on actual field work, with class work being based on preparation for field practice and summarization of field work accomplished. A limited amount of rearrangement of the program may be permitted if the background, needs, or interests of the students make such changes desirable.

The field training is obtained on the insect and rodent control program of the City of Atlanta Health Department, Atlanta, Ga., which has been in successful operation for over 5 years and has ratproofed and rat-freed the business premises of most blocks in the heart of downtown Atlanta. The use of the facilities and the assistance of the staff and personnel of the City of Atlanta Health Department have been made possible by the cooperation of the city health officer and the director of the insect and rodent control program of the City of Atlanta Health Department. Adequate personnel and equipment are available to assure effective rat control work in Atlanta and to carry out field training in rat-borne disease control methods.

Field work in this training program is supervised by the staff of the Training Services. Lectures and discussions of the problems are carried on by the staff and by authorities in special fields invited to participate in the training program. The class work is augmented, where practicable, with training films, filmstrips, models, and other visual aids.

B. ENTRANCE REQUIREMENTS

This program is planned for prospective and currently employed environmental sanitation personnel in health departments; also, personnel of other organizations actively engaged in insect and rodent control or related fields find the program of practical value.

No tuition is charged, but trainees are expected to arrange for their own living and travel expenses while in attendance, either through financial arrangement with their sponsors or through their personal resources. Accommodations for single men may be obtained at Atlanta hotels and the Atlanta YMCA, which are conveniently located near the offices of the Training Services. Accommodations for families may be secured at local motor courts and tourist homes. Upon request, and after application has been accepted and enrollment confirmed, the Training Services will endeavor to obtain reservations for such housing as may be requested specifically and may be found to be available.

Trainees should bring field work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Training Services, Communicable Disease Center, Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. For health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

SPECIAL TRAINING IN INSECT AND RODENT CONTROL

(4.2-1)

TYPE OF TRAINING PROGRAM: Special training in the identification, biology, and control of insects and rodents of public health importance

LOCATION: Training Services, Communicable Disease Center, 165 Luckie St., N.W., Atlanta, Ga.

TIME: To be arranged

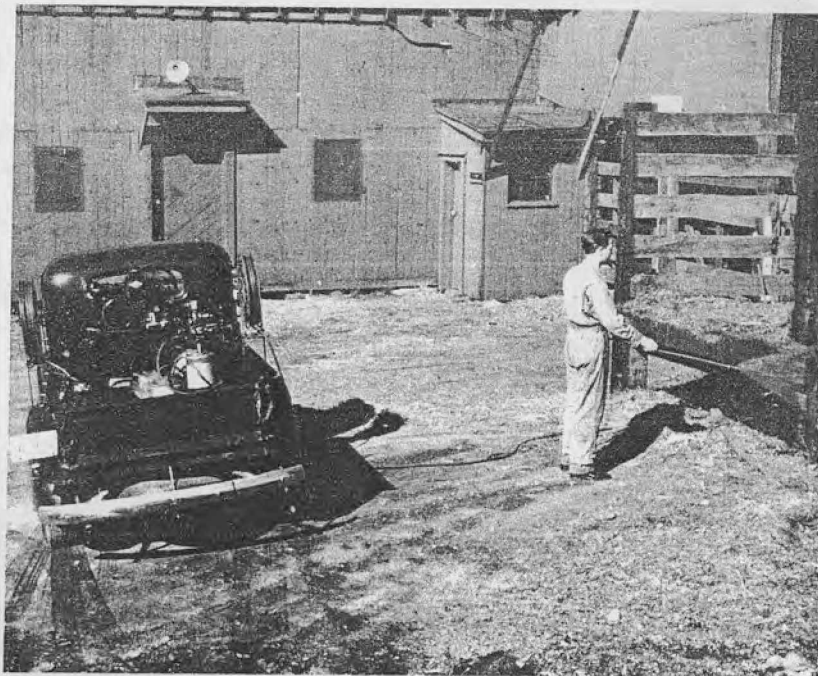
STAFF: Clyde F. Fehn, Sanitary Engineer
Kent S. Littig, Entomologist
Clarence W. Marshall, Entomologist
Alfred R. Kinney, Jr., Training Officer
Sidney P. Lanier, Training Officer
and other members of the staffs of the Training Services and the City of Atlanta Health Department

A. OUTLINE OF TRAINING PROGRAM

This is a special in-service training for new CDC personnel and certain State and local health department employees. Courses are scheduled only upon receipt of special request for such courses by the Training Services. Training is given to small or large groups and is arranged to satisfy the needs of the participants.

Facilities are available for field and laboratory training in the following subjects:

1. Fly and Mosquito Control
 - a. Biology and habits
 - b. Public health importance
 - c. Identification
 - d. Survey and evaluation methods
 - e. Control equipment, materials, and methods
2. Rodent Control
 - a. Biology and habits of rodents and rodent ectoparasites
 - b. Public health importance
 - c. Identification
 - d. Survey and evaluation methods



A trainee utilizes a specially constructed demonstration truck to apply a residual spray to a stockyard.

- e. Control equipment, materials, and methods
- 3. Identification and Control of Other Insects of Public Health Importance
 - a. Lice
 - b. Bedbugs
 - c. Ticks
 - d. Roaches
 - e. Mites

Field training in insect and rodent control operations is obtained on the insect and rodent control program of the City of Atlanta Health Department.

B. ENTRANCE REQUIREMENTS

Employees of the Communicable Disease Center will be accepted upon recommendation of the chief of the Services concerned. State and local health department personnel should be recommended by the State health officer.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Application should be made to the Chief, Training Services, Communicable Disease Center, Public Health Service, 605 Volunteer Bldg., Atlanta, Ga. Letters of application should give the name, education, and experience of each person applying for this training.

SPECIAL TRAINING IN INSECT CONTROL

(4.3-1)

TYPE OF TRAINING PROGRAM: Practical training in the control of flies, mosquitoes, and other arthropods of public health importance

LOCATION: Training Services, Communicable Disease Center, 165 Luckie St., N.W., Atlanta, Ga.

TIME: April 2-13, 1951
October 22 to November 2, 1951

STAFF: Kent S. Littig, Entomologist
Clarence W. Marshall, Entomologist
Clyde F. Fehn, Sanitary Engineer
and other members of the Training Services staff

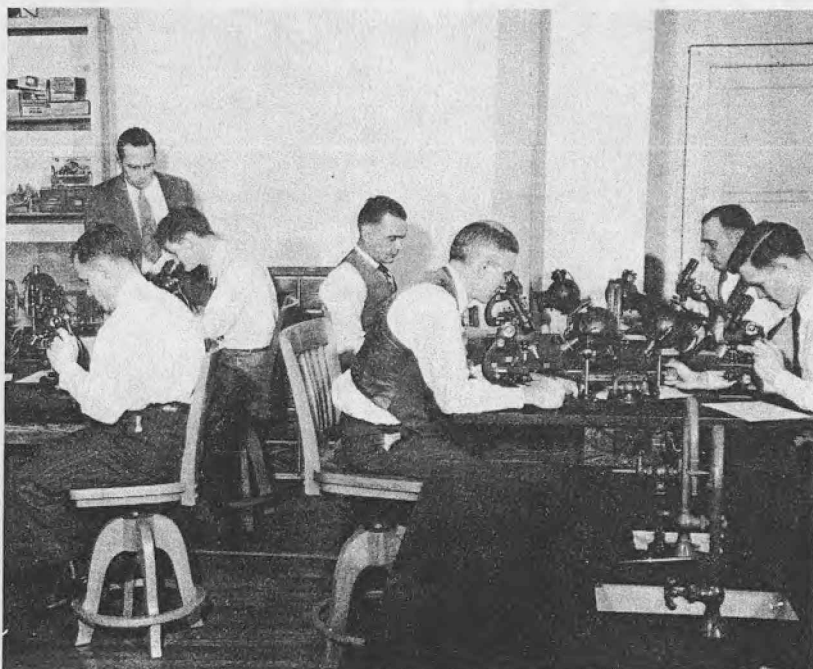
A. OUTLINE OF TRAINING PROGRAM

These 10-day training courses for public health workers are designed particularly for persons who have taken the rat-borne disease prevention and control course during the previous 3-week period. They are divided into two 5-day periods in order that trainees may enroll for either week or for the 2-week course. The first week is devoted to the biology, habits, and public health importance of flies, residual and space spraying, and the insecticides. The second week includes training in the biology, recognition, and control of mosquitoes, ticks, mites, roaches, and other arthropods. The following types of training are offered:

- Lectures and films
- Laboratory examination and identification
- Importance of sanitation
- Field sanitary surveys
- Field surveys of fly and mosquito populations
- Evaluation of fly control operations
- Field applications of residual and space sprays
- Mosquito larviciding and evaluation
- Organization of community insect control programs

B. ENTRANCE REQUIREMENTS

This program is planned for prospective and currently employed environmental sanitation personnel



A group of trainees learn to identify insects of public health importance in this specially equipped laboratory.

in health departments; also, personnel of other organizations actively engaged in insect and rodent control or related fields find the program of practical value.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through financial arrangement with their sponsors or through their personal resources. Accommodations for single men may be obtained at Atlanta hotels and the Atlanta YMCA, which are conveniently located near the offices of the Training Services. Accommodations for families may be secured at local motor courts and tourist homes. Upon request, and after application has been accepted and enrollment confirmed, the Training Services will endeavor to obtain reservations for such housing as may be requested specifically and may be found to be available.

Trainees should bring field work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Training Services, Communicable Disease Center, Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

INSECT AND RODENT CONTROL TRAINING FOR FOREIGN PUBLIC HEALTH PERSONNEL (4.4-1)

TYPE OF TRAINING PROGRAM: Practical training in the recognition and control of disease-bearing insects and rodents

LOCATION: Training Services, Communicable Disease Center, 165 Luckie St., N.W., Atlanta, Ga.

TIME: June 11-22, 1951
July 9-20, 1951
August 6-17, 1951

STAFF: Clyde F. Fehn, Sanitary Engineer
Kent S. Littig, Entomologist
Alfred R. Kinney, Jr., Training Officer
Clarence W. Marshall, Entomologist
Sidney P. Lanier, Training Officer
and other members of the staffs of the Communicable Disease Center and the City of Atlanta Health Department

A. OUTLINE OF TRAINING PROGRAM

This special 2-week course for foreign public health personnel will be offered three times during the summer of 1951 as scheduled above. United States public health workers also may enroll in these courses.

The first week of each of these courses is concerned with the recognition and control of insects of public health importance throughout the world. The second week of each course is on rodent control and is concerned particularly with the prevention of murine typhus fever and plague.

These courses consist of classroom and laboratory instruction together with field observation and participation. Classroom work is supplemented by appropriate motion picture films, filmstrips, slides,

exhibits, and distribution of literature. Field experience is obtained in Atlanta and vicinity in cooperation with the City of Atlanta Health Department.

Persons may enroll for the 2-week course, or may enroll for the first week only (insect control),



A foreign public health worker learns to operate a power fog generator.

or second week only (rodent control). Facilities are available for additional specialized training if prior arrangements are made.

B. ENTRANCE REQUIREMENTS

This program is available to public health personnel of foreign countries and the United States who are concerned with insect and rodent control. Personnel of other organizations who are engaged actively in insect or rodent control also will be accepted if facilities permit.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency to the Chief, Training Services, Communicable Disease Center, Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office. The name, education, and experience of each person applying should be included in the letter.

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FLY CONTROL (4.5-1)

TYPE OF TRAINING PROGRAM: Practical training in the control of the common flies of public health importance

LOCATION: Training Services, Communicable Disease Center, 165 Luckie St., N.W., Atlanta, Ga.

TIME: May 7-11, 1951

STAFF: Kent S. Littig, Entomologist
Clarence W. Marshall, Entomologist
Clyde F. Fehn, Sanitary Engineer
and other members of the staff of the Training Services

A. OUTLINE OF TRAINING PROGRAM

This 1-week training program is designed to acquaint public health workers with the biology, identification, and control of the common flies which occur about homes, restaurants, markets, garbage dumps, and similar places. The courses will include classroom discussions, laboratory exercises, field demonstrations, and supervised experience. The following subjects will be covered:

- Habits and characteristics of domestic flies
- Fly identification
- Relation of flies to public health
- Methods of conducting fly surveys
- Fly control methods
- Community fly control programs
- Evaluation of fly control operations



Trainees apply a residual spray to rear surfaces of a restaurant for fly control.

B. ENTRANCE REQUIREMENTS

This program is planned for prospective and currently employed environmental sanitation personnel in health departments. The program is of practical value to personnel of other organizations actively engaged in insect and rodent control or related fields.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through financial arrangement with their sponsors or through their personal resources. Accommodations for single men may be obtained at Atlanta hotels and the Atlanta YMCA, which are conveniently located near the offices of the Training Services. Accommodations for families may be secured at local motor courts and tourist homes. Upon request, and after applica-

tion has been accepted and enrollment confirmed, the Training Services will endeavor to obtain reservations for such housing as may be requested specifically and may be found to be available.

Trainees should bring field work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Training Services, Communicable Disease Center, Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

DECENTRALIZED TRAINING PROGRAMS IN INSECT AND RODENT CONTROL (4.6-1)

TYPE OF TRAINING PROGRAM: Short training programs on the control of insects and rodents of public health importance - a service to State and local health departments and schools of public health

LOCATION: Programs to be given at points designated by State health officers

TIME: To be arranged

STAFF: Clyde F. Fehn, Sanitary Engineer
Kent S. Littig, Entomologist
Clarence W. Marshall, Entomologist
Alfred R. Kinney, Jr., Training Officer
Sidney P. Lanier, Training Officer
and other members of the staff of the Training Services, and State and district CDC representatives

A. OUTLINE OF TRAINING PROGRAM

These are special programs of from 1 to 5 days to assist States in training public health personnel in the latest methods of insect and rodent control.

Emphasis in these programs is given to those disease vectors in which the trainees are particularly interested. In previous years, the time distribution according to subject matter has been as follows: 5 days of fly control, 1 to 5 days of rodent control, and 1 to 5 days of both insect and rodent control.

Material is presented by means of lectures, motion picture films, and demonstrations. Field demonstrations and practice are arranged in cooperation with existing control programs wherever possible.



Trainees learn to count flies in their own local areas.

B. ENTRANCE REQUIREMENTS

Any State, State district, or any nonprofit public health organization is eligible to receive this service.

No tuition is charged, but trainees are expected to arrange for their own living and traveling

expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Training Services, Communicable Disease Center, Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the Field Training Center must make final decisions regarding acceptance of trainees.

ADMINISTRATION OF A PUBLIC HEALTH AUDIO-VISUAL PROGRAM (5.1-8)

TYPE OF TRAINING PROGRAM: Audio-visual instruction methods assigned to public health

LOCATION: Headquarters of Audio-Visual Production Services at the Veterans' Administration Hospital near Atlanta, Ga.

TIME: February 12-16, 1951
March 12-16, 1951
August 6-10, 1951

STAFF: Gale C. Griswold
Harry A. Sherrill
Merle I. Wimmer
Everett L. Priest
Richard B. Brown
Technicians of the Services as needed

A. OUTLINE OF TRAINING PROGRAM

These are 1-week courses concerned with administration of an audio-visual program as applied to public health. The courses are given for personnel of FSA-PHS and State department of health personnel. This course is not the ordinary projectionist course, but is a comprehensive course including all aspects of an audio-visual materials program as applied to public health. The course is presented in the form of laboratory work, demonstration, and lecture. Learning by doing is emphasized.

The following outline indicates the scope of the program:

- A. Problems of administration. Training personnel for work with audio-visual materials—organizing and conducting workshops on the local level; planning for physical facilities; promotion of the program.
- B. Educational methods as applied to production, selection, distribution, utilization, and evaluation of audio-visual materials.



Federal and State public health personnel receive practical training in audio-visual education.

- C. Production of audio-visual materials. Preplanning, story development, shooting, editing, and sound are discussed. Still photography and slide making are covered briefly. Preparation of exhibits, posters, and similar visual aids, are demonstrated.
- D. Distribution of audio-visual materials. Film library operation and maintenance including promotion, cataloging, booking, shipping, filing, storage, care and repair, film sources, and library records and reports.
- E. Equipment. Selection, operation, and maintenance of all types of equipment are covered.
- F. Summarization. Emphasis is placed on local application through improved administration.

B. ENTRANCE REQUIREMENTS

To be eligible for this course, the applicant must be working now in a Federal or State public health position requiring the knowledge and skills covered, or have an assignment to such position upon return to duty.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made in writing to the Audio-Visual Production Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Bldg., Atlanta, Ga. Attendance will be limited to 15 persons. The first 15 applications will be processed for the first course. Additional applicants will be notified to the effect that they will be given first consideration for the second course, if they so desire.

FUNDAMENTAL METHODS IN PUBLIC HEALTH FIELD TRAINING

(5.2-1)

TYPE OF TRAINING PROGRAM: An introductory course in methods for instructors and other personnel engaged in field training of public health workers

LOCATION: Training Services, Communicable Disease Center, 165 Luckie St., N.W., Atlanta, Ga.

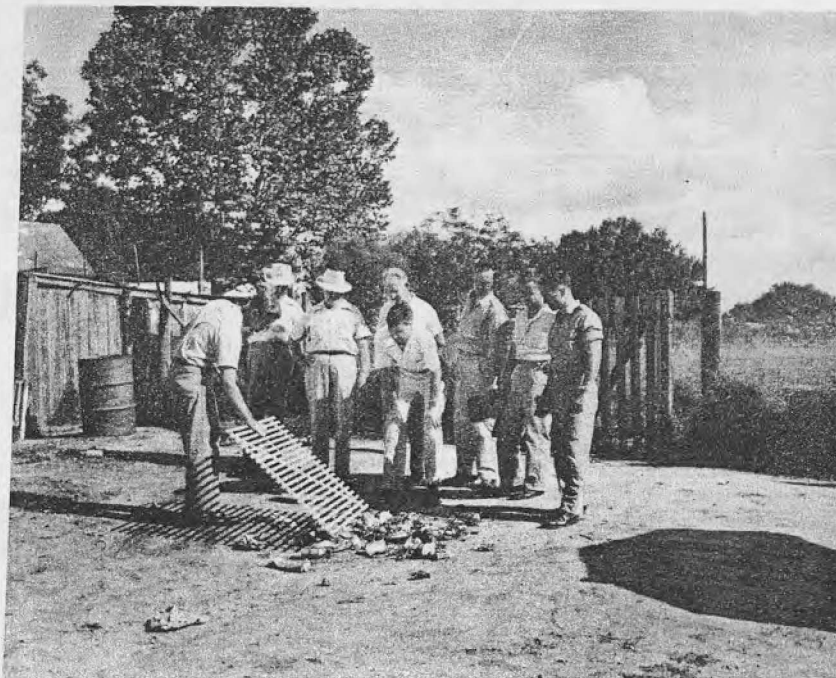
TIME: February 2-16, 1951
September 7-21, 1951

STAFF: Members of the staff of the Training Services, Communicable Disease Center, supplemented by selected specialists

A. OUTLINE OF TRAINING PROGRAM

This course is designed to give instruction in the fundamental methods employed at field training stations for public health workers. Except in the portion of the course concerned with the basic theory of teaching, the general procedure is to give instruction in the use of a technique and follow this by trainee practice. The basic phase is carried out through discussions, lectures, demonstrations, and field visits. During the practice phase, each trainee carries out individual assignments which are followed by a group critique of performance. Subject matter includes:

- Learning concepts
- Elementary psychology
- Student welfare
- Preparation of lesson plans
- Public speaking
- Presenting demonstrations
- Use of training aids
- Utilization of audio-visual materials
- Testing and grading
- Evaluation of student progress



Trainees are instructed in correct methods of conducting practical demonstrations.

B. ENTRANCE REQUIREMENTS

Applications may be made by any persons actively engaged full or part time in instruction at a field

training center for public health workers. However, due to the basic nature of the course, training officers of long experience may be admitted only on a nonparticipating basis as observers.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency to the Chief, Training Services, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office. The name, education, and experience of each person applying should be included in the letter.

ADVANCED COURSE

IN PUBLIC HEALTH FIELD TRAINING METHODS (5.3-1)

TYPE OF TRAINING PROGRAM: Special demonstrations, group discussions, and practical work on selected problems in public health field training

LOCATION: Training Services, Communicable Disease Center, 165 Luckie St., N.W., Atlanta, Ga.

TIME: March 2-9, 1951
November 2-9, 1951

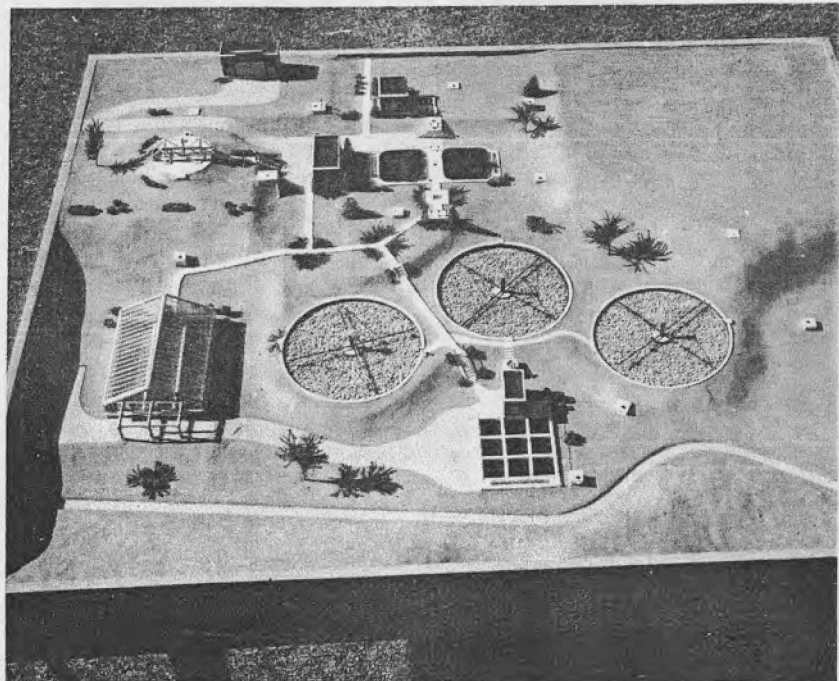
STAFF: Members of the staff of the Training Services, Communicable Disease Center, supplemented by selected specialists

A. OUTLINE OF TRAINING PROGRAM

The course is designed to afford an opportunity for experienced public health field training officers to improve their techniques. A portion of the course is devoted to group discussions permitting the trainees to exchange ideas and experiences in solution of selected problems. These are on topics of mutual interest chosen by the trainees. Demonstrations of successful teaching methods also are given by vocational specialists from industry and business and vocational schools. In addition, some time is spent in practice work. In this phase, trainee performances are followed by group critiques.

The widest latitude is allowed the trainees in selecting the subject matter for the course. A partial listing of available topics includes:

- Discussion of field training methods
- Vocational teaching techniques
- Teaching human relations
- Use of health department staff personnel in training
- Presentation of demonstrations
- Problems in scheduling
- Use of training aids other than audio-visual
- Testing, grading, and evaluation



Training aids other than audio-visual are used. A model of a sewage disposal plant is shown above.

B. ENTRANCE REQUIREMENTS

Applicants may be any persons actively engaged full time at a field training center for public health workers, with 2 or more years experience in this work. Health educators may be admitted on a non-participating basis as observers.

No tuition is charged, but trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend, their personal resources, or other arrangements with their employers.

Trainees should bring field and laboratory work clothes.

C. APPLICATIONS

Applications should be made through the sponsoring agency to the Chief, Training Services, Communicable Disease Center, Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office. The name, education, and experience of each person applying should be included in the letter.

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Training Program

At the Environmental Health Center, specialists in engineering, biology, bacteriology, chemistry, physics, radiology, and related fields are engaged in research and field investigations related to water, milk, food, water pollution, sewage and industrial wastes, radioactive waste disposal and decontamination, and atmospheric pollen. This offers a unique opportunity for a training program to be built around these activities. Advanced training courses have been designed for graduate engineering and scientific personnel, both for those with limited experience and for those who have had a wide background in their field of specialty.

The courses are presented by the training staff with the assistance of a number of experts from the Center and outstanding consultants in various fields. These courses are directed primarily toward training professional personnel from State health departments, water pollution control agencies, the Service, and other governmental units.

Arrangements are made for special training for foreign public health engineers and scientific personnel in the various activities of the Center.

Training Staff

Ernest P. Dubuque, Senior Sanitary Engineer
Harry P. Kramer, Chemist
Robert P. Myers, Bacteriologist
William M. Ingram, Biologist
Simon Kinsman, Senior Scientist
Robert G. Gallagher, Health Physicist
Donald J. Nelson, Jr., Chemical Engineer
Morton I. Goldman, Sanitary Engineer

Guest Lecturers and Consultants

Vernon G. MacKenzie, Officer in Charge, Environmental Health Center
Albert H. Stevenson, Executive Officer
C. T. Butterfield, Director of Research
Maurice LeBosquet, Jr., Director of Field Activities
C. C. Ruchhoft, Chief, Physics and Chemistry Section
L. R. Setter, Asst. Chief, Physics and Chemistry Section
P. W. Kabler, Chief, Bacteriology Section
Clarence M. Tarzwell, Chief, Biology Section
Luther A. Black, Chief, Milk and Food Sanitation Section
Paul D. Haney, Chief, Field Survey Section
H. H. Black, Chief, Industrial Wastes Section
P. Doudoroff, Aquatic Biologist
J. N. Wilson, Aquatic Biologist
M. B. Ettinger, Chemist
W. A. Moore, Chemist
H. F. Clark, Bacteriologist

John L. Phair, Epidemiologist, University of Cincinnati, Cincinnati, Ohio
Marvin L. Speck, Associate Professor, Dairy Bacteriology, University of
North Carolina, Raleigh, N. C.
James B. Lackey, Editor, The Blakiston Co., Philadelphia, Pa.
Harry Scharer, Chemist, City Department of Health, New York, N. Y.
Edward J. Cleary, Ohio River Valley Water Sanitation Commission,
Cincinnati, Ohio

ORIENTATION COURSE FOR SANITARY ENGINEERS IN WATER POLLUTION AND INDUSTRIAL WASTE SURVEY METHODS (6.1-7)

TYPE OF TRAINING PROGRAM: Lectures and laboratory practice supplemented by practical field training for sanitary engineers with limited experience in the field of water pollution and industrial waste survey methods

LOCATION: Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio

TIME: To be held in the spring; dates to be announced

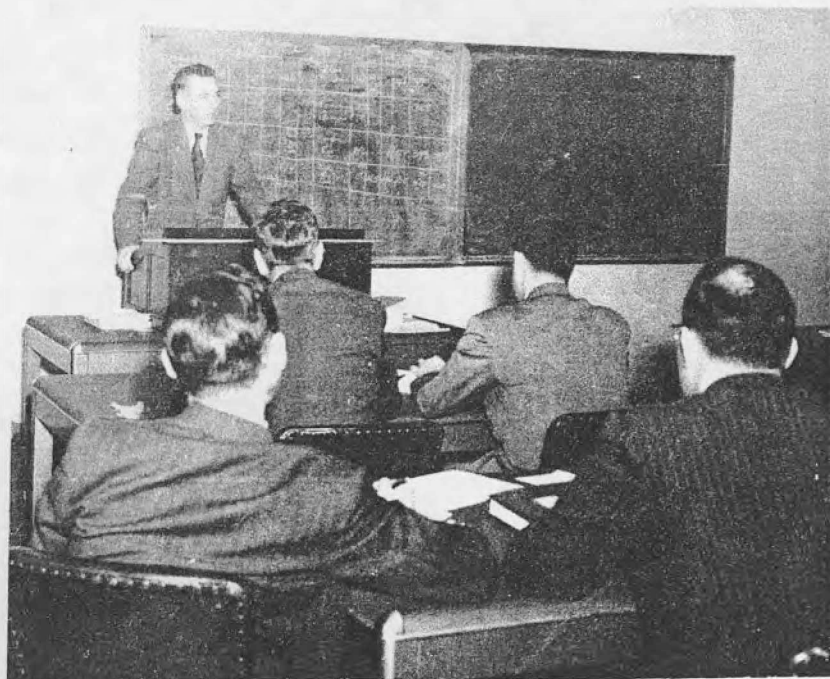
STAFF: Ernest P. Dubuque, Senior Sanitary Engineer
Harry P. Kramer, Chemist
William M. Ingram, Biologist
Robert P. Myers, Bacteriologist
Members of the training staff, personnel of the Environmental Health Center, and consultants in specific fields

A. OUTLINE OF TRAINING PROGRAM

The program covers a 2-week period and furnishes training in the techniques and methods of conducting water pollution and industrial waste surveys. The bacteriological, biological, and chemical phases are presented along with the engineering problems. Sampling and gauging equipment utilized in making surveys is demonstrated in the field and used by the trainees. Interpretation of analytical data is discussed.

Some of the major subjects in this course are:

- Organization of water pollution abatement programs
- Methods of investigating industrial waste problems
- Interpretation of data
- Bacteriological, biological, and chemical aspects of water pollution investigations
- Waste quality standards
- Conduct of a stream pollution survey
- Conduct of an industrial waste survey



Discussion periods precede all laboratory and field practice.

B. ENTRANCE REQUIREMENTS

This program is offered for sanitary engineers with little or no experience in water pollution and industrial waste survey methods. Candidates should be graduate engineers and should be recommended for training by the head of the State agency represented or by an appropriate Federal official.

No tuition is charged. Trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend or other means.

C. APPLICATIONS

Applications should be made through the sponsoring agency and be addressed to the Chief, Training Section, Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio; or to the appropriate Public Health Service Regional Office. The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the division head of the organization concerned.

ADVANCED SANITARY ENGINEERING TRAINING IN WATER POLLUTION ABATEMENT PROGRAMS (6.2-7)

TYPE OF TRAINING PROGRAM: Lectures, laboratory demonstrations and practice, with emphasis on interpretations, field demonstration, and practice in the use of survey equipment (for supervisory sanitary engineering personnel)

LOCATION: Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio

TIME: March 12-23, 1951

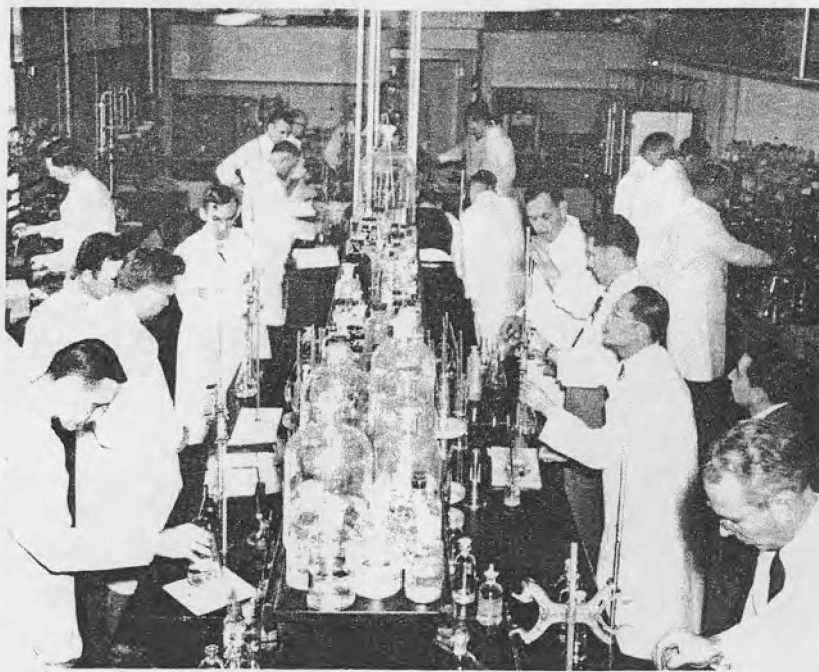
STAFF: Ernest P. Dubuque, Senior Sanitary Engineer
Harry P. Kramer, Chemist
William M. Ingram, Biologist
Robert P. Myers, Bacteriologist
Members of the training staff, personnel of the Environmental Health Center, and prominent consultants in specific fields

A. OUTLINE OF TRAINING PROGRAM

The program covers a 2-week period, furnishing training in the organization and operation of water pollution and industrial waste surveys. Time is devoted to the latest techniques, methods, and interpretation of bacteriological, biological, and chemical examinations of water, sewage, and industrial wastes. The bacteriological, chemical, and biological phases of the sanitary engineering problems are considered equally with the engineering aspects. Emphasis is on the administration of stream pollution programs, including field demonstrations of the latest techniques and developments for making stream sanitation surveys and interpretation of data. Time is available for informal group discussions of special problems.

Some of the major subjects to be covered in this technical training course are:

- Methods of organizing water pollution abatement programs and industrial waste surveys
- Legal aspects of water pollution abatement



Engineers analyzing stream samples for dissolved oxygen content.

Methods of investigating industrial waste problems and latest developments on the removal of substances causing taste and odor problems
The latest bacteriological, biological, and chemical test techniques for use in water pollution abatement programs
Statistical methods as applied to stream pollution data
Interpretation of water pollution data and its application to water supplies
Water quality standards
Practical application of corrective measures to water pollution problems

Laboratory demonstrations and practice are carried out at the Environmental Health Center training laboratory.

B. ENTRANCE REQUIREMENTS

This program is offered for sanitary engineers with a wide background in water pollution control. Candidates should be graduate engineers and should be recommended for training by the State health officer, the head of the State agency responsible for water pollution control, or an appropriate Federal official.

No tuition is charged. Trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend or other means.

C. APPLICATIONS

Letters of application for this program should be sent to the Chief, Training Section; Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio; or to the appropriate Public Health Service Regional Office. The letter should give the name and a brief outline of the education and experience of each applicant and should bear the appropriate recommendation of his superior. Applications should be made prior to February 2, 1951.

ORIENTATION COURSE FOR CHEMISTS, BACTERIOLOGISTS, AND BIOLOGISTS IN THE EXAMINATION OF SEWAGE, POLLUTED WATER, AND INDUSTRIAL WASTES (6.3-7)

TYPE OF TRAINING PROGRAM: Lectures, laboratory and field demonstrations and practice, and interpretation of results (for chemists, bacteriologists, and biologists with limited experience in this field)

LOCATION: Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio

TIME: Fall, 1951; dates to be announced

STAFF: Ernest P. Dubuque, Senior Sanitary Engineer¹
Harry P. Kramer, Chemist
William M. Ingram, Biologist
Robert P. Myers, Bacteriologist
Members of the training staff, personnel of the Environmental Health Center, and consultants in specific fields

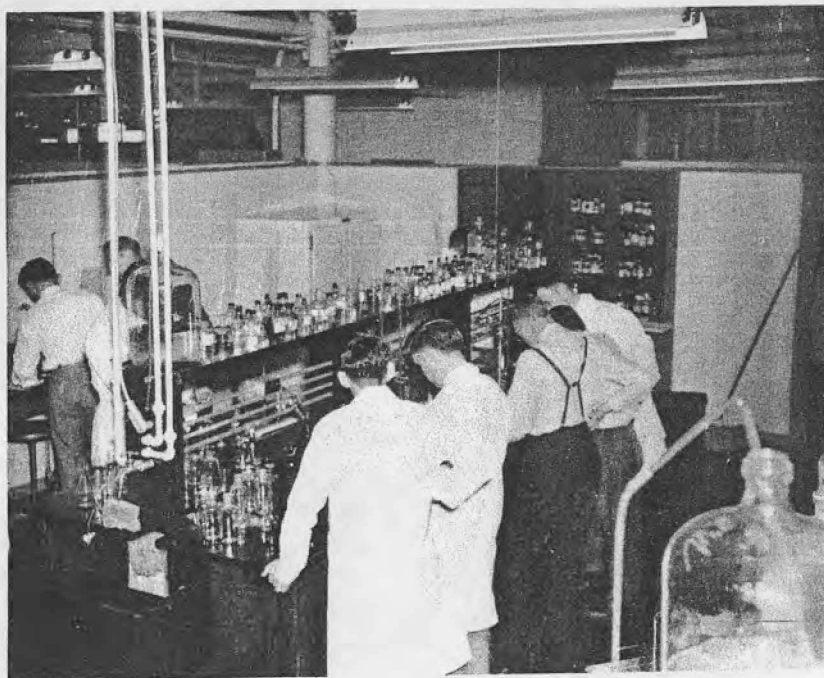
A. OUTLINE OF TRAINING PROGRAM

The program covers a 3-week period of intensive training in the latest techniques in standard and nonstandard methods of making chemical, bacteriological, and biological examinations of samples encountered in stream pollution and industrial waste surveys.

The theory and interpretation of the tests used in stream pollution and industrial waste surveys are treated in discussions and field demonstrations. Field and laboratory demonstrations and intensive practice are carried out in the training laboratory and mobile field laboratory. Ample time is allowed for informal discussions of methods and the interpretation of results.

Some of the major subjects which are covered in this field and laboratory course are:

Field application of standard methods for determining D.O. and B.O.D. and the effect of various interfering substances on these determinations



Laboratory practice in the biochemical oxygen demand techniques.

Determination of phenols
Determination of cyanides
Ammonia, nitrite, nitrate, and Kjeldahl nitrogen, alkalinity, acidity, pH, solids, odor and turbidity determinations
Methods of investigating industrial waste problems
Significance of the coliform and enterococcus groups as indicators of pollution
Bactericidal agents for water
Biological indicators of pollution

Field work is done in the vicinity of Cincinnati, Ohio.

B. ENTRANCE REQUIREMENTS

This program is offered for graduate chemists, bacteriologists, or biologists who have had little or no experience in the field of sanitary chemistry and sanitary bacteriology and is designed especially for those who are employed on water pollution and industrial waste survey programs.

No tuition is charged. Trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend or other means.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the Chief, Training Section, Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio; or to the appropriate Public Health Service Regional Office. The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the division head of the organization concerned.

ADVANCED TRAINING COURSE FOR STATE SANITARY CHEMISTS
PRIMARILY CONCERNED
WITH WATER POLLUTION INVESTIGATIONS (6.4-7)

TYPE OF TRAINING PROGRAM: Special technical training program for sanitary chemists primarily concerned with water pollution investigations

LOCATION: Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio

TIME: To be held in the fall; dates to be announced

STAFF: Ernest P. Dubuque, Senior Sanitary Engineer
Harry P. Kramer, Chemist
William M. Ingram, Biologist
Robert P. Myers, Bacteriologist
Members of the training staff, personnel of the Environmental Health Center, and prominent consultants in specific fields

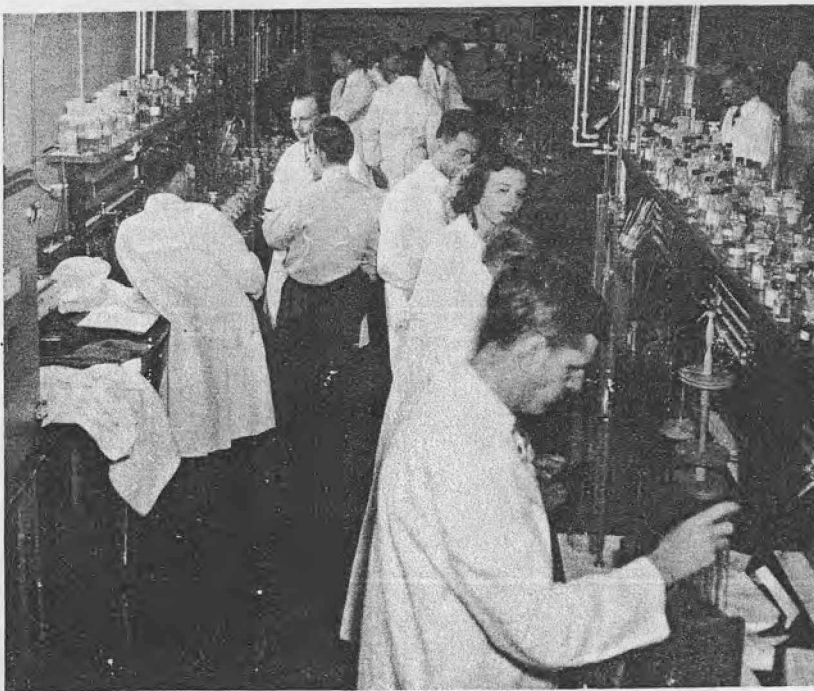
A. OUTLINE OF TRAINING PROGRAM

A 2-week refresher program designed for the evaluation of the chemical, engineering, bacteriological, and biological principles underlying the investigation of water pollution problems. Particular emphasis is placed on problems of a chemical nature. Improved methods for analyses developed at the Environmental Health Center research laboratories are explained and demonstrated in the laboratory. Statistical treatment of data is presented and interpretation of data is the subject of extensive discussion.

A mobile laboratory is used in the field to demonstrate the practical application of standard methods and a consideration given to their values and limitations. Practical applications of the latest techniques for sampling, analysis, and related problems are demonstrated in the field.

Some of the major subjects to be covered in this advanced technical training course are:

Organization of stream pollution and industrial waste surveys



Chemists determining the amount of various nitrogen compounds in stream samples.

The practical application of B.O.D. and dissolved oxygen determination
The role of the biologist in pollution abatement programs
Bioassays of toxic wastes in relation to industrial waste disposal
Field determination of toxic materials in industrial waste and its effect on B.O.D.
Sanitary significance of indicator organisms in water bacteriology
Statistical methods as applied to stream sanitation
Practical application of water quality standards
Interpretation of water pollution data

B. ENTRANCE REQUIREMENTS

This program is offered for sanitary chemists with a considerable background in water pollution investigations. Candidates should have bachelors' degrees and should be recommended for training by the State health officer, the head of the State agency responsible for water pollution control, or an appropriate Federal official.

No tuition is charged. Trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend or other means.

C. APPLICATIONS

Letters of application for this program should be sent to the Chief, Training Section, Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio; or to the appropriate Public Health Service Regional Office. The letters should give the name and a brief outline of the education and experience of each applicant and should bear the appropriate recommendation of his superior.

ADVANCED TRAINING COURSE FOR STATE BACTERIOLOGISTS PRIMARILY CONCERNED WITH WATER ANALYSIS (6.5-7)

TYPE OF TRAINING PROGRAM: Lectures, laboratory demonstrations, laboratory practice, field demonstrations, and interpretation of results (for experienced bacteriologists)

LOCATION: Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio

TIME: Winter, 1951; dates to be announced

STAFF: Ernest P. Dubuque, Senior Sanitary Engineer
Harry P. Kramer, Chemist
William M. Ingram, Biologist
Robert P. Myers, Bacteriologist
Members of the training staff, personnel of the Environmental Health Center, and prominent consultants in specific fields

A. OUTLINE OF TRAINING PROGRAM

This program, which lasts only 1 week, precedes the course in dairy bacteriology and food utensil examination. The course is devoted to water bacteriology with secondary emphasis on related phases of chemistry, biology, and sanitary engineering encountered in stream sanitation. Standard methods of water analysis are supplemented with newer methods which are proving useful in examination of water. Some of the subjects which are covered include:

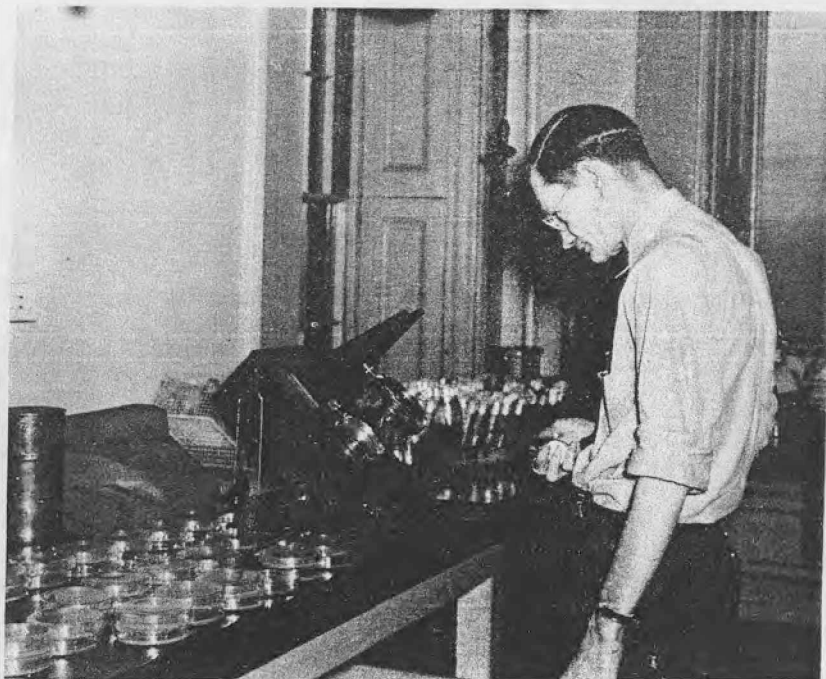
- Sample collection

- Relative value of coliform media in water analysis

- Media and technique for detection and enumeration of enterococci

- Significance of the coliform and enterococcus groups as indicators of pollution

- Bacteriological agents for water



Bacteriologist making total plate count on water samples.

B. ENTRANCE REQUIREMENTS

This program is offered for bacteriologists with a wide background in sanitary bacteriology who are in charge of or in responsible positions in State health department laboratories engaged in water

analysis. Candidates should have bachelors' degrees and should be recommended for training by the State health officer or by an appropriate Federal officer.

No tuition is charged. Trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend or other means.

C. APPLICATIONS

Letters of application for this program should be sent to the Chief, Training Section, Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio; or to the appropriate Public Health Service Regional Office. The letter should give the name and a brief outline of education and experience of each applicant and should bear the appropriate recommendation of his superiors.

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ADVANCED TRAINING COURSE FOR STATE BACTERIOLOGISTS CONCERNED WITH THE EXAMINATION OF MILK, DAIRY PRODUCTS, AND FOOD UTENSILS (6.6-7)

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TYPE OF TRAINING PROGRAM: Lectures, laboratory demonstrations, laboratory practice, field demonstrations, and interpretation of results (for experienced bacteriologists)

LOCATION: Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio

TIME: Winter, 1951; dates to be announced

STAFF: Ernest P. Dubuque, Senior Sanitary Engineer
Harry P. Kramer, Chemist
William M. Ingram, Biologist
Robert P. Myers, Bacteriologist
Members of the training staff, personnel of the Environmental Health Center, and prominent consultants in specific fields

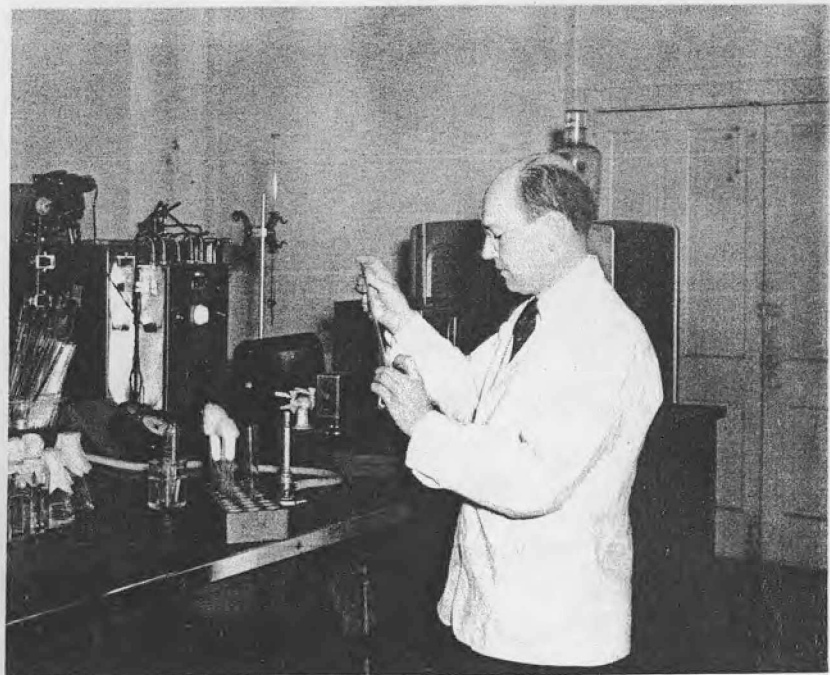
A. OUTLINE OF TRAINING PROGRAM

The program covers a 2-week period of advanced training in theory, laboratory techniques, and interpretation of results obtained in the field of sanitary bacteriology as they pertain to the analysis of milk and dairy products and the examination of food utensils.

Particular emphasis is placed on standard methods for examination of dairy products and on certain screening tests of aid in determining sanitary quality.

Some of the major subjects which are covered in the training course are:

- Sample collecting techniques
- Preparation for bacteriological tests, including culture media
- Plate counts on standard and selective media
- Microscopic counts and staining methods
- Methylene blue and resazurin reduction tests on milk
- Laboratory pasteurization test



Demonstration of techniques for testing the efficiency of bactericidal agents.

Coliform tests on milk
Phosphatase test
Bacteriological examination of frozen desserts
Methods of taking swab and rinse samples on food utensils
Tests for evaluating chemical sanitizing agents

B. ENTRANCE REQUIREMENTS

This program is offered for bacteriologists with a wide background in sanitary bacteriology who are in charge of or in responsible positions in State health department laboratories engaged in milk analyses and dairy products and food utensil examinations. Candidates should have bachelors' degrees and should be recommended for training by the State health officer or by an appropriate Federal official.

No tuition is charged. Trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend or other means.

C. APPLICATIONS

Letters of application for this program should be sent to the Chief, Training Section, Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio; or to the appropriate Public Health Service Regional Office. The letter should give the name and a brief outline of education and experience of each applicant and should bear the appropriate recommendation of his superiors.

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TRAINING COURSE IN WATER AND AIR POLLUTION PROBLEMS CAUSED BY CHEMICAL INDUSTRIES (6.7-7)

TYPE OF TRAINING PROGRAM: A study of water and air pollution problems caused by chemical industries, for a group of 16 European engineers, two each from Sweden, Denmark, Belgium, France, Germany, Italy, United Kingdom, and The Netherlands

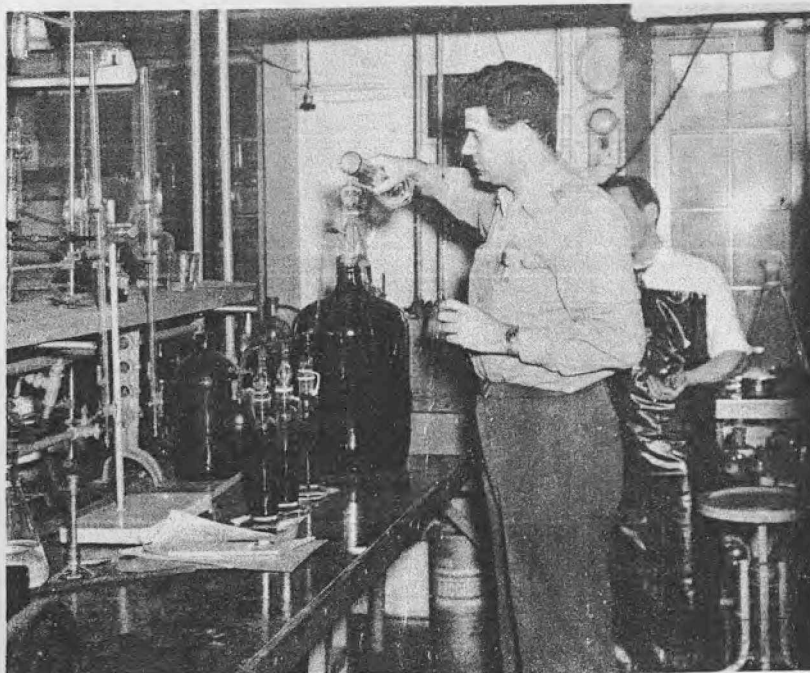
LOCATION: Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio, and selected points

TIME: To be held in the spring; dates to be announced

STAFF: Vernon G. MacKenzie, Sanitary Engineer Director
Ernest P. Dubuque, Senior Sanitary Engineer
Lewis J. Cralley, Senior Scientist
Members of the training staff, personnel of the Environmental Health Center, and Division of Industrial Hygiene, and prominent consultants in specific fields

A. OUTLINE OF TRAINING PROGRAM

Training course of 1-week duration and seminar including lectures, films, laboratory demonstrations, panel discussions by training staff, and provision for informal discussion by study group of engineers. The program of training considers waste from chemical industries with particular reference to those engaged in oil refining and synthetic rubber, plastics, rayon, and hydrocarbon production. It includes the study of the economics pertaining to the recovery and utilization of waste products contributing to the pollution of the atmosphere and streams. The group visits specific industries in Cincinnati, Ohio; Pittsburgh, Pa.; Cleveland, Ohio; Chicago, Ill.; St. Louis, Mo.; New Orleans and Baton Rouge, La.; and Los Angeles, Calif. Some municipal plants, State offices, and control agencies also are visited.



Chemist demonstrating method for measuring the persistence of a toxic material under anaerobic conditions.

B. ENTRANCE REQUIREMENTS

Trainees will be selected by the Economic Cooperation Administration.

No tuition is charged. Trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend or other means.

C. APPLICATIONS

Letters of application for this program should be sent to the Chief, Training Section, Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio.

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BASIC RADIOLOGICAL HEALTH TRAINING (6.8-7)

TYPE OF TRAINING PROGRAM: Lectures, discussions, conferences, classroom demonstrations, laboratory, laboratory demonstrations, and practical exercises in radiation detection, measurement, and shielding

LOCATION: Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio

TIME: Several courses during the year; dates to be announced

STAFF: Simon Kinsman, Senior Scientist
Robert G. Gallagher, Health Physicist
Donald J. Nelson, Jr., Chemical Engineer
Morton I. Goldman, Sanitary Engineer
and other members of training staff, personnel of Environmental Health Center and Radiological Health Branch (Division of Engineering Resources), and prominent consultants in specific fields

A. OUTLINE OF TRAINING PROGRAM

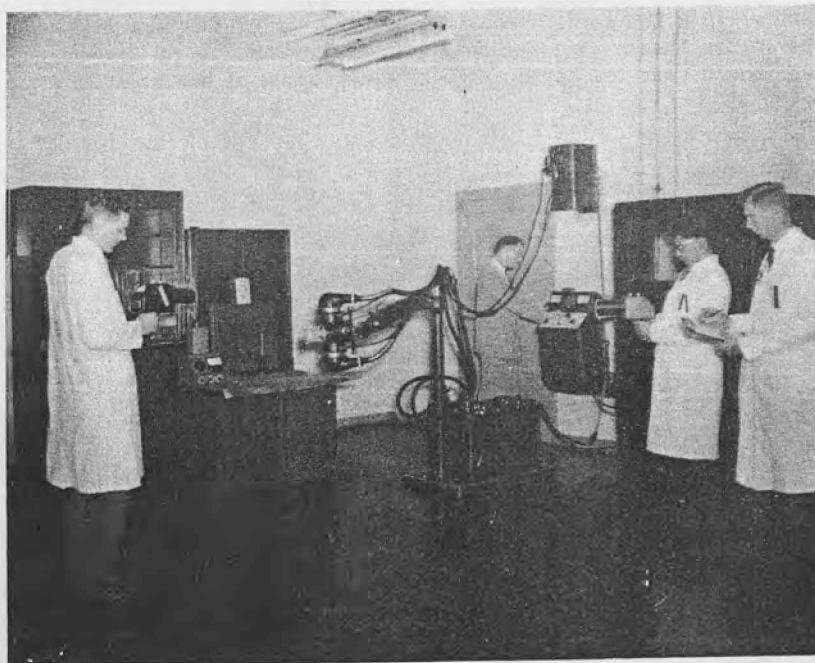
The program covers a 2-week period of basic theory of radiation and radiation detecting instruments, the use and maintenance of instruments for measuring radiation, the detrimental effects of radiation, the means of shielding and protection against radiation, and recommended permissible radiation dosage. This is augmented by laboratory work and practical exercises in calibration and use of radiation detecting instruments for measuring X-rays, alpha, beta, and gamma rays, and for establishing and operating a personnel monitoring organization with specific training in film badge service. Time is allotted to a review of the basic mathematics, physics, chemistry, and biology which is utilized in the understanding of the interaction of radiation with matter. Ample time is

provided for conferences or discussions on related subjects or additional reviews on any of the subjects presented. This is determined by student demand.

Approximately one-half of the scheduled instruction time is devoted to lectures and informal discussion relative to the interpretation of results. The remaining time is devoted to laboratory work and practical exercises.

Some of the major subjects covered in this training course are:

Definition and description of the language and units of radiation



Trainees are establishing isodose lines of stray radiation about an X-Ray machine.

Biological effects of radiation
 Radiation physics
 Medical aspects of radiation
 General theory and use of radiation detecting and measuring instruments
 Area and personnel monitoring
 Uses of radiation and radioisotopes
 Radiation shielding and attenuation
 Decontamination and waste disposition
 Public health aspects of radiation
 Organization of a health physics group

B. ENTRANCE REQUIREMENTS

This program is offered for professional people who are or will be concerned primarily with radiological health problems in their respective areas. Candidates should have a degree in medicine, engineering, physical science, or biological science and have had considerable experience in public health work. Applicants who have been certified in the 2-, 3-, or 6-week courses in radiological defense since July 1, 1948, are not eligible.

No tuition is charged. Necessary texts are furnished; however, trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend or other means.

C. APPLICATIONS

Letters of application for this program should be sent to the Officer in Charge, Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio; or to the appropriate Public Health Service Regional Office. The letter should give the name and a brief outline of the education and experience of each applicant, and should bear the appropriate recommendation of his superiors.

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RADIOLOGICAL HEALTH INDOCTRINATION COURSE FOR SUPERVISORY PERSONNEL OF STATE AND LOCAL HEALTH DEPARTMENTS (6.9-7)

TYPE OF TRAINING PROGRAM: A short course covering the radiological health problems likely to be encountered by State and local health supervisors

LOCATION: Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio

TIME: Dates to be announced

STAFF: Simon Kinsman, Senior Scientist
Robert G. Gallagher, Health Physicist
Donald J. Nelson, Jr., Chemical Engineer
Morton I. Goldman, Sanitary Engineer
and other members of the training staff, personnel of Environmental Health Center and Radiological Health Branch (Division of Engineering Resources), and prominent consultants in the field of radiological health

A. OUTLINE OF TRAINING PROGRAM

(1-week course or less to be announced.)

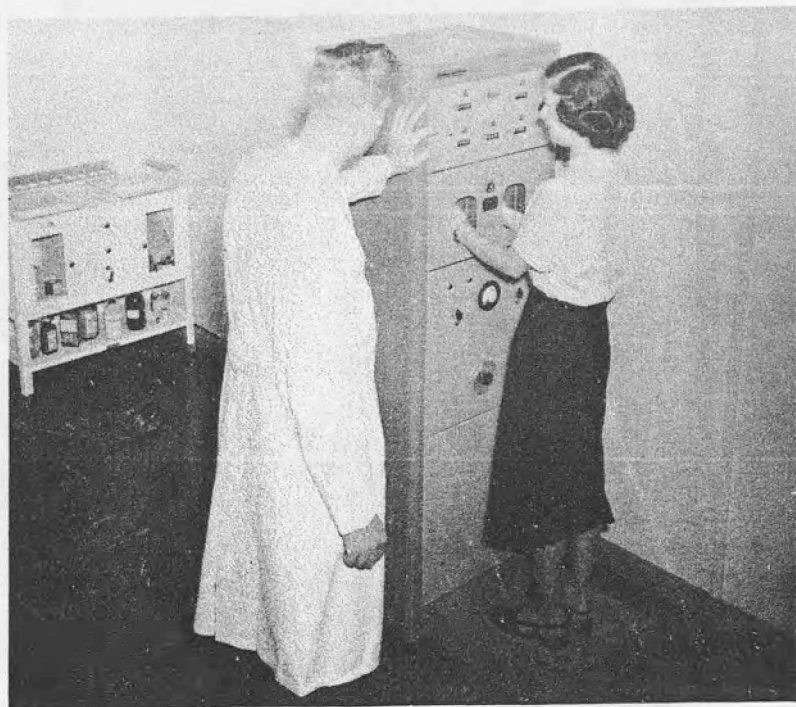
B. ENTRANCE REQUIREMENTS

This program is offered for supervisory professional personnel of State and local health departments and city planning commissions.

No tuition is charged. Trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend or other means.

C. APPLICATIONS

Information for prospective applicants may be obtained from the Officer in Charge, Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio.



The hands and feet of a technician are being monitored for accidental contamination.

BASIC COURSE IN RADIOLOGICAL HEALTH INSTRUMENTATION

(6.10-7)

TYPE OF TRAINING PROGRAM: An intensive training program in instrumentation for radiological health activities designed to qualify course graduates in the proper use of radiation detection instruments, their maintenance and repair

LOCATION: Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio

TIME: Dates to be announced

STAFF: Simon Kinsman, Senior Scientist
Robert G. Gallagher, Health Physicist
Donald J. Nelson, Jr., Chemical Engineer
Morton I. Goldman, Sanitary Engineer
and other members of training staff, personnel of Environmental Health Center and Radiological Health Branch (Division of Engineering Resources), and consultants in the field of radiation detection instruments

A. OUTLINE OF TRAINING PROGRAM

(3- to 6-week courses to be announced.)

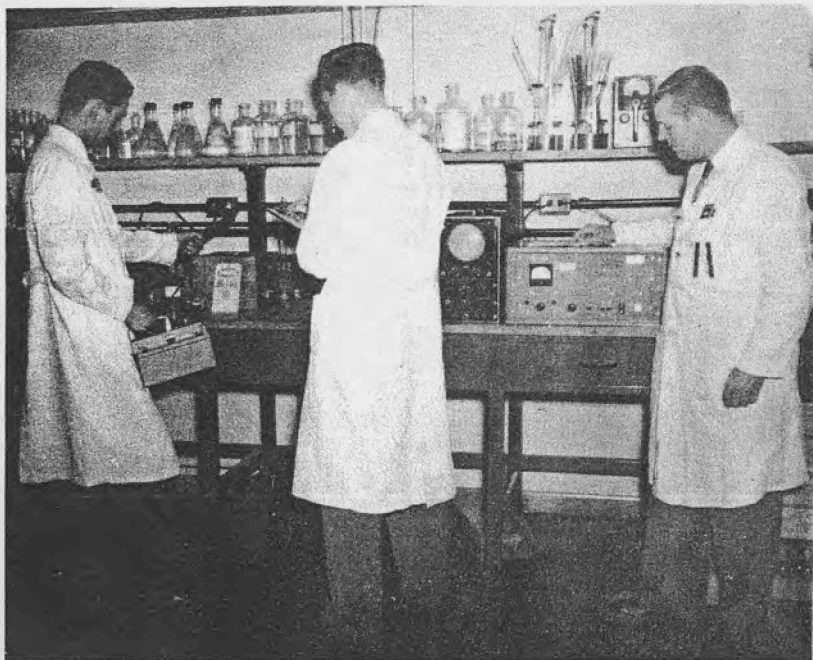
B. ENTRANCE REQUIREMENTS

This program is offered for electrical engineering graduates, electronics graduates, or technicians with suitable experience in electronics or electrical instruments.

No tuition is charged. Trainees are expected to arrange for their own living and traveling expenses while in attendance, either through State stipend or other means.

C. APPLICATIONS

Information for prospective applicants may be obtained from the Officer in Charge, Environmental Health Center, 1014 Broadway, Cincinnati 2, Ohio.



Trainees monitor level of radioactivity in laboratory.

BULLETIN OF
LABORATORY
REFRESHER
TRAINING
COURSES

JAN. 1 - DEC. 31

1951

FEDERAL SECURITY AGENCY
Public Health Service
Bureau of State Services
Division of Tuberculosis
Division of Venereal Disease
Communicable Disease Center
Atlanta, Ga.

System of Code Numbers of Laboratory Training Programs and Locations of Training Laboratories

Public Health Laboratory Programs

8.00 to 8.09 }	Courses in parasitology, medical entomology, and mycology
8.10 to 8.19 }	
8.20 to 8.29 }	Courses in virology and rickettsiology
8.30 to 8.39 }	
8.40 to 8.49 }	Courses in bacteriology
8.50 to 8.59 }	
8.60 to 8.69 }	
8.70 to 8.79 }	Courses in serology
8.80 to 8.89 }	Courses in clinical pathology
8.90 to 8.99 }	
9.00 to 9.09 }	Courses in hematology
9.10 to 9.19 }	Courses in clinical chemistry
9.20 to 9.29 }	Courses for central services personnel
9.30 to 9.39 }	Courses for laboratory directors and laboratory supervisors
9.40 to 9.49 }	Courses for health officers and epidemiologists
9.50 to 9.59 }	Courses for public health nurses
9.60 to 9.69 }	Courses for foreign students
9.70 to 9.79 }	
9.80 to 9.89 }	Courses in the States by special arrangement
9.90 to 9.99 }	

City Locations

- 0 - Special arrangement
- 1 - Atlanta, Ga.
- 2 - Bloomington, Ill.
- 3 - Columbus, Ga.
- 4 - Topeka, Kans.
- 5 - Albany, Ga.
- 6 - Buffalo, N.Y.
- 7 - Cincinnati, Ohio
- 8 - Chamblee, Ga.
- 9 - Montgomery, Ala.
- 10 - San Francisco, Calif.
- 11 - Denver, Colo.
- 12 - Syracuse, N.Y.
- 13 - Amherst, Mass.
- 14 - Pittsburgh, Pa.

The course number is designated by the code number for the training program followed by the code number of the location, separated by a hyphen.

List Of Laboratory Training Courses

INDEX

PROGRAM NO. *	TITLE	DURATION	PAGE NO.
8.00-8	Laboratory Diagnosis of Parasitic Diseases Part 1. Intestinal Parasites	3 Wks.	21
8.01-8	Laboratory Diagnosis of Parasitic Diseases Part 2. Blood Parasites	3 Wks.	23
**8.05-8	Laboratory Diagnosis of Malaria	2 Wks.	25
**8.10-8	Identification of Medically Important Arthropods	2 Wks.	27
8.15-8	Laboratory Diagnosis of Mycotic Diseases Part 1. Cutaneous and Subcutaneous Fungi	2 Wks.	29
8.16-8	Laboratory Diagnosis of Mycotic Diseases Part 2. Systemic Fungi	2 Wks.	31
8.20-9	Laboratory Diagnosis of Virus Diseases	4 Wks.	33
**8.21-9	Virus Isolation and Identification Techniques	2-4 Wks.	35
**8.25-9	Laboratory Diagnosis of Influenza	1 Wk.	37
8.26-9	Laboratory Diagnosis of Rabies	1 Wk.	39
8.40-8	Laboratory Diagnosis of Bacterial Diseases General Bacteriology, Part 1	2 Wks.	41
8.41-8	Laboratory Diagnosis of Bacterial Diseases General Bacteriology, Part 2	2 Wks.	43
**8.42-8	Typing of <i>Corynebacterium Diphtheriae</i>	1 Wk.	45
8.50-8	Laboratory Diagnosis of Enteric Diseases Part 1. Introductory Enteric Bacteriology	1 Wk.	47
8.51-8	Laboratory Diagnosis of Enteric Diseases Part 2. Advanced Enteric Bacteriology	2 Wks.	49
**8.52-8	Phage Typing of <i>Salmonella typhosa</i>	1 Wk.	51
8.55-8	Laboratory Diagnosis of Tuberculosis	2 Wks.	53
8.72-8	Laboratory Diagnosis of Syphilis	2 Wks.	55
8.73-8	Preparation and Standardization of Serologic Reagents Used in the Laboratory Diagnosis of Syphilis	3 Wks.	57
**8.75-8	Serologic Diagnosis of Rickettsial Diseases	1 Wk.	59
9.10-1	Clinical Chemistry Part 1. Introductory and General Procedures	1 Wk.	61
9.11-1	Clinical Chemistry Part 2. Quantitative Analyses	2 Wks.	63
**9.12-1	Advanced Quantitative Analyses in Clinical Chemistry	1 Wk.	65
**9.13-1	Toxicology	1 Wk.	67
9.33-8	Laboratory Diagnosis of Parasitic Diseases (Directors)	1 Wk.	69
9.34-8	Laboratory Diagnosis of Bacterial Diseases (Directors)	1 Wk.	71

PROGRAM NO. *	TITLE	DURATION	PAGE NO.
9.35-8	Laboratory Diagnosis of Mycotic Diseases (Directors)	1 Wk.	73
9.36-8	Laboratory Diagnosis of Tuberculosis (Directors)	1 Wk.	75
9.37-9	Laboratory Diagnosis of Virus Diseases (Directors)	1 Wk.	77
9.38-8	Laboratory Diagnosis of Venereal Diseases (Directors)	1 Wk.	79
9.39-8	<i>Treponema Pallidum</i> Immobilization (Directors)	1 Wk.	81
9.60-8	Microbiology for Public Health Nurses	1 Wk.	83

*Digit left of decimal indicates basic program type.

Digit right of decimal indicates variations within the basic program.

Digit right of hyphen indicates principal location of training laboratory.

**Course given by special arrangement only.

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PAGE
NO.
73
75
77
79
81
83

Laboratory Services

Communicable Disease Center

Staff Members

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R. B. Hogan, M.D., M.P.H., Chief
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J. Acosta-Matienzo, M.S.

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C. Riddle, B.A.
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Qualitative Analytical Unit

E. E. Mandel, M.D., In Charge

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R. H. Owings, M.S.
F. L. Jones, B.S.

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R. E. Limbert, B.S.

WESTERN CDC LABORATORY SECTION

V. B. Link, M.D., M.P.H., In Charge

Plague and Rodent Control Unit

V. B. Link, M.D., M.P.H., In Charge

WESTERN CDC LABORATORY SECTION (contd.)

Medical Entomology Unit

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Arthur A. Rosenberg, M.S.
Virginia L. Harding, B.S.

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G. John
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Harry Mo
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Gilbert
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William
Medica

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- Harry Most, M.D., D.T.M. and H. Professor of Preventive Medicine, New York University College of Medicine, 477 First Ave., New York 16, N.Y.
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- William G. Sawitz, M.D. Associate Professor of Parasitology and Associate in Medicine, Jefferson Medical College, Philadelphia, Pa.

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David T. Smith, M.D. Professor of Bacteriology, Duke University School of Medicine, Durham, N.C.

William Steenken, Jr., Director of Research and Clinical Laboratories, Trudeau Sanitarium, Trudeau, N.Y.

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Herbert A. Wenner, M.D. Assistant Professor of Pediatrics and Bacteriology, University of Kansas, Kansas City, Kans.

Henry S. Willis, M.D. Superintendent and Medical Director, North Carolina Sanitarium for the Treatment of Tuberculosis, McCain, N.C.

C. Eugene Woodruff, M.D. Director of Laboratories, Wm. H. Maybury Sanitarium, Northville, Mich.

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Schedule of Laboratory Training Courses

Jan. 1 to Dec. 31, 1951

DATES	COURSES	DURATION	PROGRAM & LOCATION NUMBER *
Feb. 12-23	LABORATORY DIAGNOSIS OF SYPHILIS	2 Wks.	8.72-8
Feb. 26 to Mar. 2	MICROBIOLOGY FOR PUBLIC HEALTH NURSES	1 Wk.	9.60-8
Feb. 26 to Mar. 9	LABORATORY DIAGNOSIS OF BACTERIAL DISEASES GENERAL BACTERIOLOGY, PART 1	2 Wks.	8.40-8
Mar. 5-23	LABORATORY DIAGNOSIS OF PARASITIC DISEASES PART 1. INTESTINAL PARASITES	3 Wks.	8.00-8
Mar. 12-23	LABORATORY DIAGNOSIS OF BACTERIAL DISEASES GENERAL BACTERIOLOGY, PART 2	2 Wks.	8.41-8
Mar. 12-23	LABORATORY DIAGNOSIS OF SYPHILIS	2 Wks.	8.72-8
Mar. 26 to Apr. 13	LABORATORY DIAGNOSIS OF PARASITIC DISEASES PART 2. BLOOD PARASITES	3 Wks.	8.01-8
Mar. 26-30	LABORATORY DIAGNOSIS OF ENTERIC DISEASES PART 1. INTRODUCTORY ENTERIC BACTERIOLOGY	1 Wk.	8.50-8
Apr. 2-13	LABORATORY DIAGNOSIS OF ENTERIC DISEASES PART 2. ADVANCED ENTERIC BACTERIOLOGY	2 Wks.	8.51-8
Apr. 16-27	LABORATORY DIAGNOSIS OF MYCOTIC DISEASES PART 1. CUTANEOUS AND SUBCUTANEOUS FUNGI	2 Wks.	8.15-8
Apr. 16-27	LABORATORY DIAGNOSIS OF TUBERCULOSIS	2 Wks.	8.55-8
Apr. 16-27	LABORATORY DIAGNOSIS OF SYPHILIS	2 Wks.	8.72-8
Apr. 16 to May 11	LABORATORY DIAGNOSIS OF VIRUS DISEASES	4 Wks.	8.20-9
Apr. 30 to May 11	LABORATORY DIAGNOSIS OF MYCOTIC DISEASES PART 2. SYSTEMIC FUNGI	2 Wks.	8.16-8
Apr. 30 to May 11	LABORATORY DIAGNOSIS OF TUBERCULOSIS	2 Wks.	8.55-8
May 7-11	LABORATORY DIAGNOSIS OF VENEREAL DISEASES **	1 Wk.	9.38-8
May 14-18	LABORATORY DIAGNOSIS OF MYCOTIC DISEASES **	1 Wk.	9.35-8
May 14-18	LABORATORY DIAGNOSIS OF TUBERCULOSIS **	1 Wk.	9.36-8
May 14-18	TREPONEMA PALLIDUM IMMOBILIZATION **	1 Wk.	9.39-8
May 14-18	LABORATORY DIAGNOSIS OF RABIES	1 Wk.	8.26-9
May 14-18	CLINICAL CHEMISTRY PART 1. INTRODUCTORY AND GENERAL PROCEDURES	1 Wk.	9.10-1
May 21-25	LABORATORY DIAGNOSIS OF PARASITIC DISEASES **	1 Wk.	9.33-8
May 21-25	LABORATORY DIAGNOSIS OF BACTERIAL DISEASES **	1 Wk.	9.34-8
May 21-25	LABORATORY DIAGNOSIS OF VIRUS DISEASES **	1 Wk.	9.37-9
May 21 to June 1	CLINICAL CHEMISTRY PART 2. QUANTITATIVE ANALYSES	2 Wks.	9.11-1
June 4-15	LABORATORY DIAGNOSIS OF SYPHILIS	2 Wks.	8.72-8

*Refer to System of Code Numbers of Laboratory Training Programs and Locations of Training Laboratories.

**These courses are designed for directors.

DATES	COURSES	DURATION	PROGRAM & LOCATION NUMBER *
Aug. 27-31	MICROBIOLOGY FOR PUBLIC HEALTH NURSES	1 Wk.	9.60-8
Aug. 27 to Sept. 7	LABORATORY DIAGNOSIS OF BACTERIAL DISEASES GENERAL BACTERIOLOGY, PART 1	2 Wks.	8.40-8
Sept. 3-21	LABORATORY DIAGNOSIS OF PARASITIC DISEASES PART 1. INTESTINAL PARASITES	3 Wks.	8.00-8
Sept. 3-28	LABORATORY DIAGNOSIS OF VIRUS DISEASES	4 Wks.	8.20-9
Sept. 10-21	LABORATORY DIAGNOSIS OF BACTERIAL DISEASES GENERAL BACTERIOLOGY, PART 2	2 Wks.	8.41-8
Sept. 10-21	LABORATORY DIAGNOSIS OF SYPHILIS	2 Wks.	8.72-8
Sept. 24 to Oct. 12	LABORATORY DIAGNOSIS OF PARASITIC DISEASES PART 2. BLOOD PARASITES	3 Wks.	8.01-8
Sept. 24-28	LABORATORY DIAGNOSIS OF ENTERIC DISEASES PART 1. INTRODUCTORY ENTERIC BACTERIOLOGY	1 Wk.	8.50-8
Oct. 1-12	LABORATORY DIAGNOSIS OF ENTERIC DISEASES PART 2. ADVANCED ENTERIC BACTERIOLOGY	2 Wks.	8.51-8
Oct. 1-5	LABORATORY DIAGNOSIS OF RABIES	1 Wk.	8.26-9
Oct. 8-12	LABORATORY DIAGNOSIS OF VIRUS DISEASES **	1 Wk.	9.37-9
Oct. 22-26	LABORATORY DIAGNOSIS OF PARASITIC DISEASES **	1 Wk.	9.33-8
Oct. 22-26	LABORATORY DIAGNOSIS OF BACTERIAL DISEASES **	1 Wk.	9.34-8
Oct. 22 to Nov. 2	LABORATORY DIAGNOSIS OF SYPHILIS	2 Wks.	8.72-8
Oct. 29 to Nov. 2	LABORATORY DIAGNOSIS OF MYCOTIC DISEASES **	1 Wk.	9.35-8
Oct. 29 to Nov. 2	LABORATORY DIAGNOSIS OF TUBERCULOSIS **	1 Wk.	9.36-8
Oct. 29 to Nov. 2	CLINICAL CHEMISTRY PART 1. INTRODUCTORY AND GENERAL PROCEDURES	1 Wk.	9.10-1
Nov. 5-16	LABORATORY DIAGNOSIS OF MYCOTIC DISEASES PART 1. CUTANEOUS AND SUBCUTANEOUS FUNGI	2 Wks.	8.15-8
Nov. 5-16	LABORATORY DIAGNOSIS OF TUBERCULOSIS	2 Wks.	8.55-8
Nov. 5-23	PREPARATION AND STANDARDIZATION OF SEROLOGIC REAGENTS USED IN THE LABORATORY DIAGNOSIS OF SYPHILIS	3 Wks.	8.73-8
Nov. 5-16	CLINICAL CHEMISTRY PART 2. QUANTITATIVE ANALYSES	2 Wks.	9.11-1
Nov. 19-30	LABORATORY DIAGNOSIS OF MYCOTIC DISEASES PART 2. SYSTEMIC FUNGI	2 Wks.	8.16-8
Nov. 19-30	LABORATORY DIAGNOSIS OF TUBERCULOSIS	2 Wks.	8.55-8
By Special Arrangement	LABORATORY DIAGNOSIS OF MALARIA	2 Wks.	8.05-8
	IDENTIFICATION OF MEDICALLY IMPORTANT ARTHROPODS	2 Wks.	8.10-8
	TYPING OF <i>CORYNEBACTERIUM DIPHTHERIAE</i>	1 Wk.	8.42-8
	PHAGE TYPING OF <i>SALMONELLA TYPHOSA</i>	1 Wk.	8.52-8
	SEROLOGIC DIAGNOSIS OF RICKETTSIAL DISEASES	1 Wk.	8.75-8
	VIRUS ISOLATION AND IDENTIFICATION TECHNIQUES	2-4 Wks.	8.21-9
	LABORATORY DIAGNOSIS OF INFLUENZA	1 Wk.	8.25-9
	ADVANCED QUANTITATIVE ANALYSES IN CLINICAL CHEMISTRY	1 Wk.	9.12-1
	TOXICOLOGY	1 Wk.	9.13-1

SCHEDULE OF LABORATORY TRAINING COURSES*

Jan. 1, 1951 to Dec. 31, 1951

LOCATION →		BLDG. 27 CHAMBLEE	BLDG. 30 CHAMBLEE	BLDG. 24 CHAMBLEE	VIRUS LABS MONTGOMERY	CLIN. PATH. LABS ATLANTA
DATES						
FEB 12	FEB 16			8.72-8		
	19 23					
8.20-9	26 MAR 2	9.60-8	8.40-8			
8.41-8	MAR 5 9	8.00-8	8.41-8	8.72-8		
	12 16					
8.72-8	19 23		8.50-8			
	26 30					
8.01-8	APR 2 6	8.01-8	8.51-8			
	9 13					
	16 20	8.15-8	8.55-8	8.72-8		
8.50-8	23 27				8.20-9	
	30 MAY 4	8.16-8	8.55-8			
8.51-8	MAY 7 11			9.38-8		
	14 18	9.35-8	9.36-8	9.39-8	8.26-9	9.10-1
	21 25	9.33-8	9.34-8		9.37-9	9.11-1
8.26-9	28 JUNE 1					
9.37-9	JUNE 4 8			8.72-8		
9.33-8	11 15					
9.34-8	18 22					
8.72-8	25 29					
	JULY 2 6					
9.35-8	9 13					
9.36-8	16 20					
9.10-1	23 27					
	30 AUG 3					
8.15-8	AUG 6 10					
	13 17					
	20 24					
	27 31	9.60-8	8.40-8			
8.55-8	SEPT 3 7	8.00-8	8.41-8	8.72-8	8.20-9	
8.73-8	10 14					
	17 21		8.50-8			
	24 28	8.01-8	8.51-8		8.26-9	
9.11-1	OCT 1 5				9.37-9	
	8 12					
	15 19					
	22 26	9.33-8	9.34-8	8.72-8		9.10-1
8.16-8	29 NOV 2	9.35-8	9.36-8			
	NOV 5 9	8.15-8	8.55-8	8.73-8		9.11-1
8.55-8	12 16					
8.05-8	19 23	8.16-8	8.55-8			
8.10-8	26 30					
8.42-8	BY SPECIAL ARRANGEMENT ONLY		8.05-8	8.42-8	8.21-9	9.12-1
8.52-8				8.52-8		9.13-1
8.75-8			8.10-8	8.75-8		
8.21-9						
8.25-9					8.25-9	

* REFER TO INSIDE FRONT COVER FOR CODE SYSTEM OF COURSE NUMBERS.

TIME FLOW CHART OF LABORATORY TRAINING COURSES

BY SPECIAL ARRANGEMENT ONLY		FEB		MAR				APR				MAY				JUNE		LOCATION	
		12-16	19-23	26-2	5-9	12-16	19-23	26-30	2-6	9-13	16-20	23-27	30-4	7-11	14-18	21-25	28-1		4-8
8.05 8.10		9.60 8.00 8.01 8.15 8.16 9.35 9.33																	BLDG. 27 CHAMBLEE
8.42 8.52 8.75		8.40 8.41 8.50 8.51 8.55 8.55 9.36 9.34																	BLDG. 30 CHAMBLEE
		8.72	8.72				8.72				9.38 9.39		8.72				BLDG. 24 CHAMBLEE		
8.21 8.25		8.20 8.26 9.37																	VIRUS LABS MONTGOMERY
9.12 9.13		9.10 9.11																	CLIN.PATH. LABS ATLANTA
BY SPECIAL ARRANGEMENT ONLY		AUG			SEPT				OCT				NOV				DEC		LOCATION
		13-17	20-24	27-31	3-7	10-14	17-21	24-28	1-5	8-12	15-19	22-26	29-2	5-9	12-16	19-23	26-30	3-7	
8.05 8.10		9.60 8.00 8.01 9.33 9.35 8.15 8.16																	BLDG. 27 CHAMBLEE
8.42 8.52 8.75		8.40 8.41 8.50 8.51 9.34 9.36 8.55 8.55																	BLDG. 30 CHAMBLEE
		8.72 8.72 8.73																	BLDG. 24 CHAMBLEE
8.21 8.25		8.20 8.26 9.37																	VIRUS LABS MONTGOMERY
9.12 9.13		9.10 9.11																	CLIN.PATH.LABS ATLANTA

REFER TO PAGES 7 AND 8 FOR LIST OF LABORATORY TRAINING COURSES

FSA-ATLANTA, GA.

Atlanta Hotels

	AAA Rating	Single	Double	Telephone No.
Ansley Hotel 98 Forsyth St., N.W.	First class	\$ 4.00 Up	\$ 5.50 Up	LA-2461
Atlanta Biltmore Hotel 817 W. Peachtree St., N.W.	First class	4.00 "	7.00 "	EM-3461
Atlantan Hotel 111 Luckie St., N.W.	Good	4.00 "	6.00 "	LA-6461
Briarcliff Hotel 1050 Ponce de Leon Ave., N.E.	Very nice	4.00 "	5.50 "	AT-9711
Clermont Hotel 799 Ponce de Leon Ave., N.E.		3.00 "	6.00 "	AT-8611
Cox Carlton Hotel 683 Peachtree St., N.E.	Good	3.50 "	5.00 "	VE-7721
Frances Hotel 343 Peachtree St., N.E.		\$17.50 per week	\$24.50 per week	LA-2636
Five Fifty-one Hotel 551 Ponce de Leon Ave., N.E.		2.50 Up	4.00 Up	VE-4761
Georgian Terrace Hotel 659 Peachtree St., N.E.	Popular	4.00 "	6.00 "	VE-6671
Henry Grady Hotel 210 Peachtree St., N.W.	First class	3.50 "	6.00 "	LA-3211
Imperial Hotel 355 Peachtree St., N.E.		3.50 "	5.00 "	LA-1941
Pershing Hotel 1428 Peachtree St., N.E.		4.00 "	6.00 "	AT-8621
Piedmont Hotel 108 Peachtree St., N.W.	Well maintained	3.50 "	5.50 "	LA-2431
Robert Fulton Hotel 114 Luckie St., N.W.		3.00 "	5.00 "	LA-3261
Southland Hotel 825 Ponce de Leon Ave., N.E.		\$21.00 per week	\$31.50 per week	HE-3120

REFER TO PAGES 7 AND 8 FOR LIST OF LABORATORY TRAINING COURSES

PSA-ATLANTA-GA.

ATLANTA

9.11

9.10

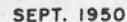
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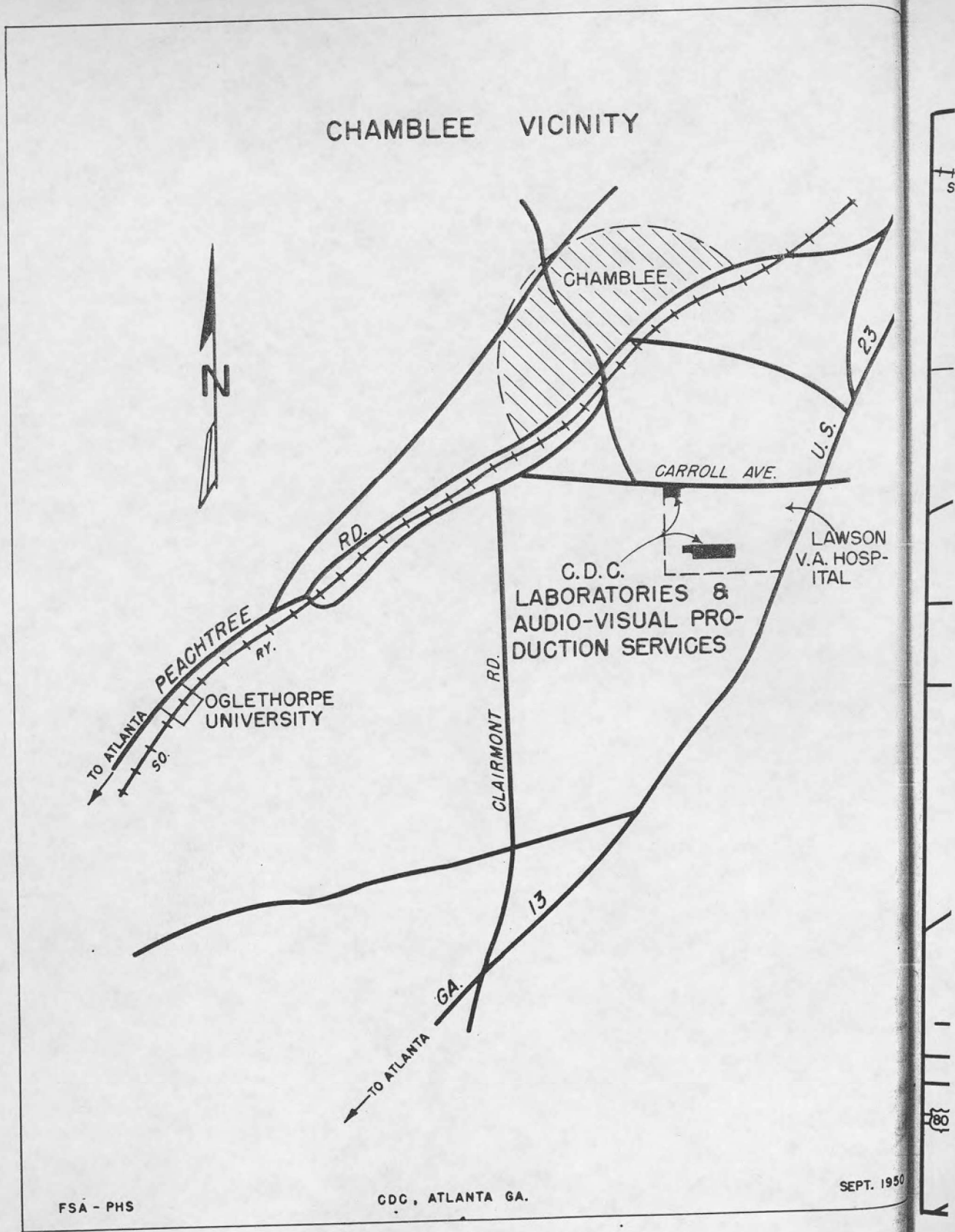
9.13

Montgomery Hotels

	AAA Rating	Single	Double	Telephone
Exchange Hotel 5 Commerce St.		\$2.75 Up	\$3.50 Up	8371
Greystone Hotel 100 Commerce St.		2.50 "	3.50 "	6641
Jefferson Davis Hotel 320 Montgomery St.	Very good	3.25 "	4.50 "	5251
Whitley Hotel 215 Montgomery St.	Very nice	3.25 "	4.50 "	6461

64 61





VICINITY MAP OF MONTGOMERY, ALA. SHOWING LOCATION OF PUBLIC HEALTH SERVICE LABORATORY

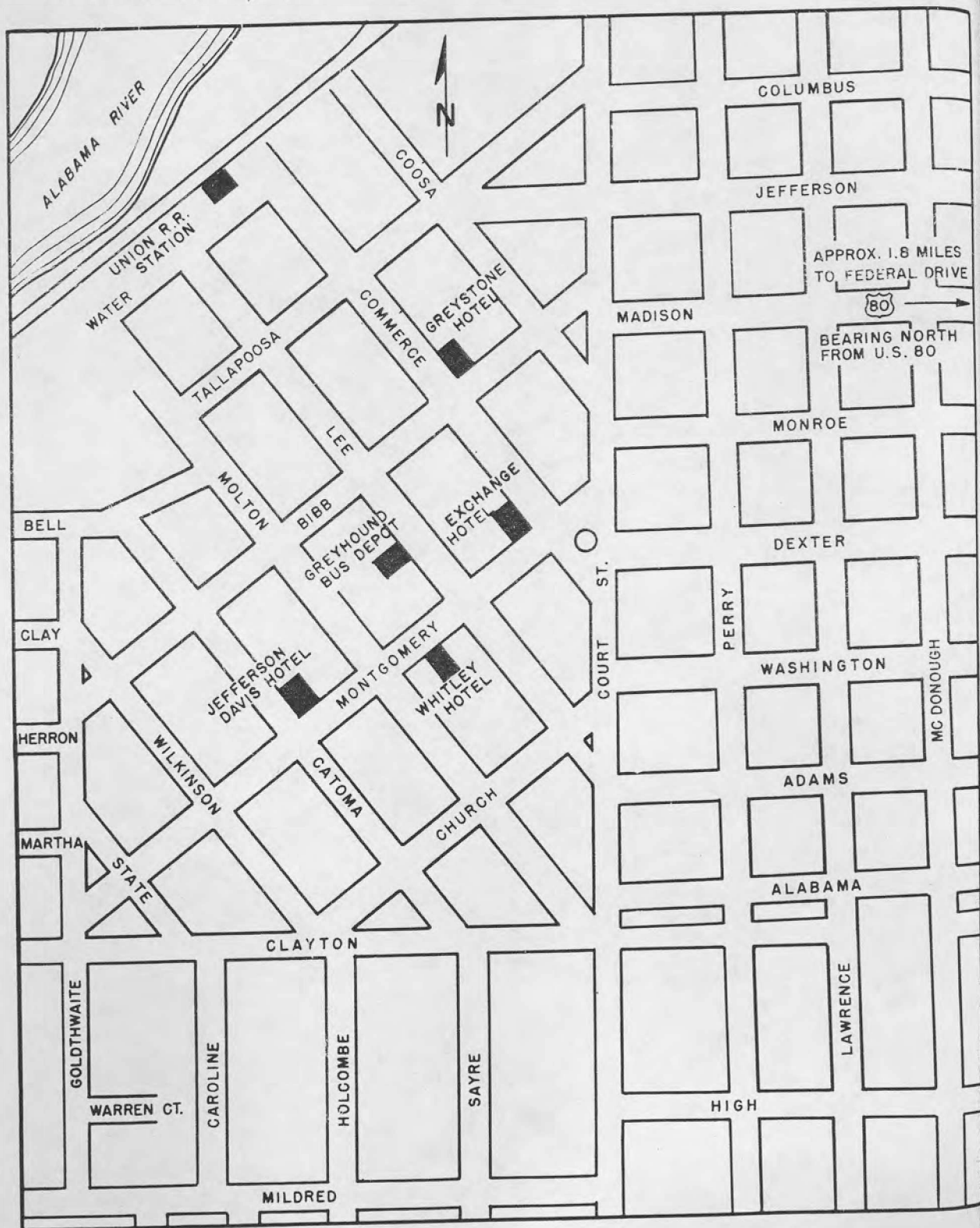


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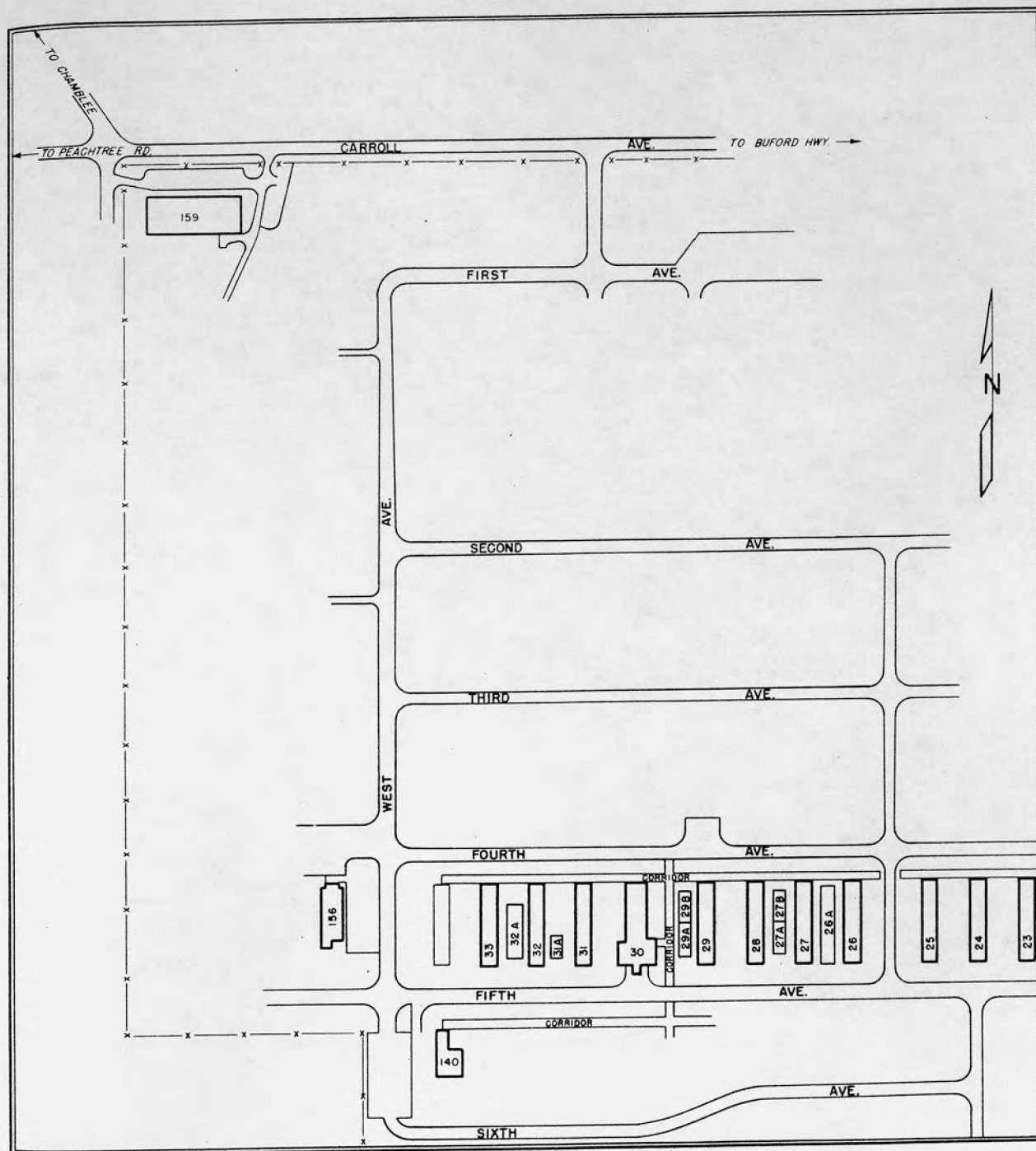
SEPT. 1950

DOWNTOWN MONTGOMERY

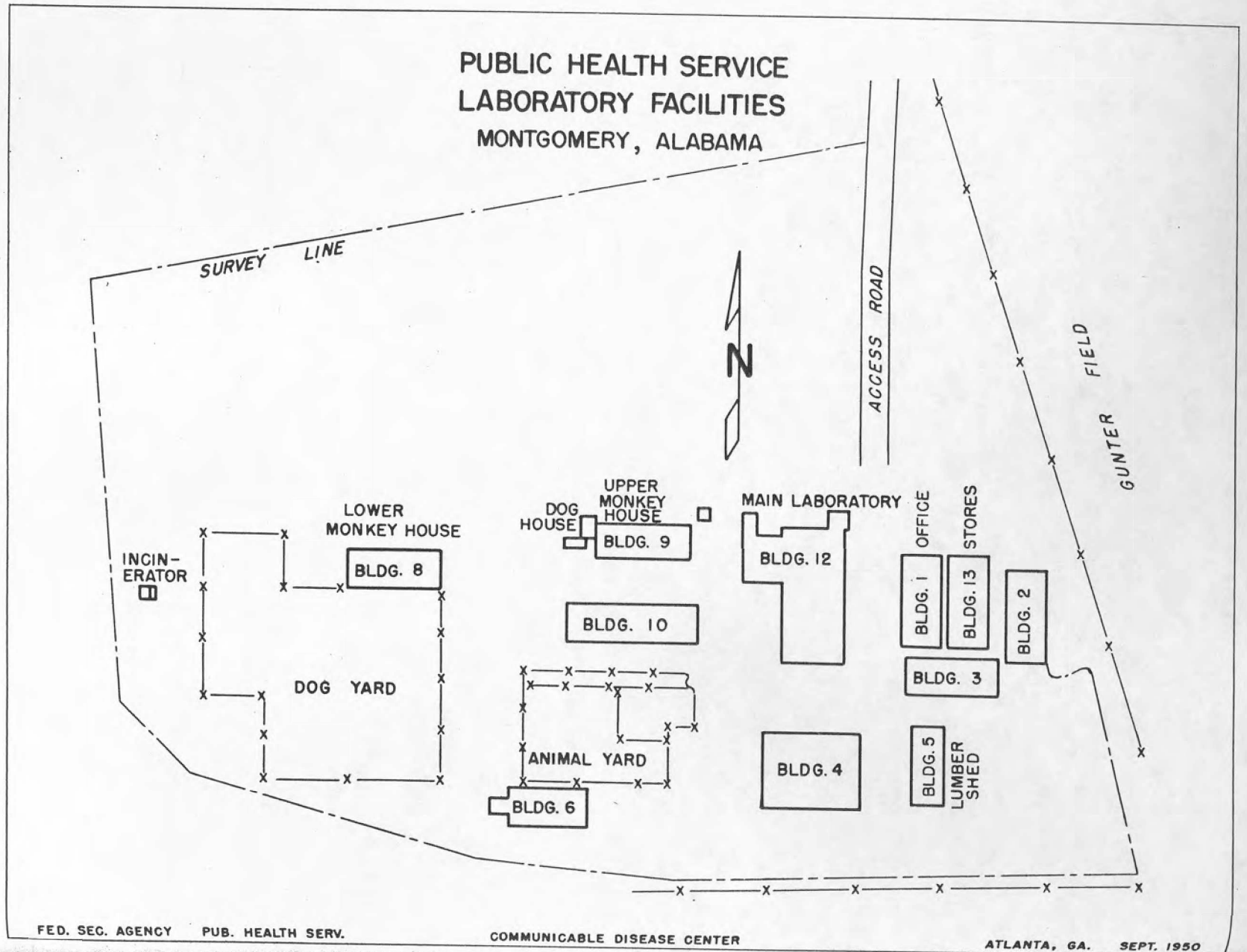
SHOWING LOCATION OF HOTELS & TRANSPORTATION FACILITIES



C. D. C.
LABORATORY SERVICES
— — —
AUDIO — VISUAL
PRODUCTION SERVICES
BUILDINGS AT V.A. HOSPITAL
CHAMBLEE, GEORGIA



PUBLIC HEALTH SERVICE LABORATORY FACILITIES MONTGOMERY, ALABAMA



General Information for the Group of Courses in Laboratory Diagnosis

- Type of Training Program:** Practical refresher courses in the principles and practice of laboratory methods in the diagnosis of disease. Emphasis is placed on the practical aspects of diagnostic laboratory procedures.
- Aim of Training:** To develop accuracy and dependability in the professional laboratory worker; to acquaint him with the best methods and apparatus available for each procedure; to familiarize him with the basic principles underlying each step; and to allow for interchange of ideas and discussion of problems with other students in group seminars.
- Type of Instruction:** Laboratory exercises, lectures, demonstrations, motion picture films, and group discussions. A high instructor-student ratio is maintained.
- Size of Classes:** Most classes are limited to 22 students.
- Fees:** No tuition or laboratory fees are charged.
- Travel Arrangements and Expenses:** To be arranged and paid for by the student or his employer.
- Living Accommodations:** It is suggested that trainees obtain reservations for living accommodations at the earliest possible date. The hotel lists and maps given herein may be of some help. If accommodations do not meet needs of students, the training office will be glad to assist in obtaining more suitable quarters after their arrival.
- Eating Facilities:** Restaurants and cafeterias are located near places where classes are held. Special arrangements will be made for the virus classes in Montgomery.
- Transportation to and from Classes:** Government buses will provide transportation to and from classes in courses which are given in the laboratories of the Communicable Disease Center at Chamblee, Ga., leaving Atlanta at 8:00 a.m., and returning from Chamblee at 4:30 p.m. Special arrangements will be made for the virus classes in Montgomery.
- Time of Classes:** Classes are held daily, Monday through Friday, from 8:30 a.m. to 4:00 p.m.
- Laboratory Equipment, Supplies, and Books:** All necessary laboratory equipment is loaned to the student for the duration of the course. Fresh and preserved materials and animals are made available. Textbooks are available for loan. Information sheets and certain manuals are given to students.
- Library Facilities:** Adequate facilities for reference are made available at the Communicable Disease Center Library, Atlanta; at the CDC Laboratories in Chamblee; and at the Emory University Medical Library. A branch library is located at the Virus Laboratories in Montgomery.
- Examinations:** Practical, oral, and written examinations are given for grading of students in most of the courses. No examinations are given in the courses for laboratory directors.
- Extension Service:** The laboratories from which students come to attend certain courses are placed on the Extension Service of the laboratory concerned. Specimens are mailed at intervals to the laboratory and become the property of the recipient laboratory. They serve as refresher materials for trained employees; as training materials for new employees; as test materials at the discretion of the laboratory director; as reference materials with which to compare unusual specimens, and as demonstration materials at meetings. In addition to the more common specimens, every effort is made to get unusual materials which are not readily available in this country and are seen infrequently by laboratory workers in this country. The aim of the Extension Service is to have as many people as possible in each laboratory see these materials, and to make them available to other laboratories nearby.
- Eligibility:** This training is open to all grades of employed laboratory personnel from non-profit diagnostic laboratories who are approved by their State health officers. Each applicant is expected to have had at least one laboratory course in elementary bacteriology, mycology, serology, or chemistry at an approved institution, or at least 2 years' experience in a diagnostic laboratory, involving the handling

of living pathogenic organisms. In recommending students for their courses, State health officers and laboratory directors are reminded that students with good educational background will profit much more from the courses than poorly prepared students. Laboratory directors and senior laboratory staff members may make application for the longer courses instead of the shorter ones if they prefer to do so.

Selection of Students: First consideration is given to the laboratories of State and local health departments, Federal agencies, and other nonprofit organizations. Preference is given in areas where the particular training is most urgently needed and where such services will be of the greatest value to the public. Other factors being equal, the earliest date of application receives first choice. Acceptances are made approximately 1 month before the beginning of the course.

Applications: Application forms should be requested from Laboratory Training Services, Communicable Disease Center, P.O. Box 185 Chamblee, Ga., or from the State health officer.

Applications for training should be submitted for the approval of the State health officer concerned, and forwarded to Laboratory Training Services, Communicable Disease Center. This should be done as far in advance as possible so that notification of acceptance can be made in sufficient time for the trainee to arrange for living accommodations. Applications from Federal personnel should be submitted for approval through the Chief of the Bureau or Division in which the applicant is employed.

A separate application form should be submitted for each course or part of course the applicant wishes to attend. Every effort will be made to allow students who so desire to attend consecutive courses, since in many instances it may mean a substantial saving in travel cost. Students are urged to complete courses whenever possible. Where the time available permits attendance in only one part of a course, every effort should be made to complete that course by attendance in the other part when time can be spared.

LAB

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LABORATORY DIAGNOSIS OF PARASITIC DISEASES

PART 1. INTESTINAL PARASITES (8.00-8)

DATES: March 5-23, 1951
September 3-21, 1951

LOCATION: Parasitology and Mycology Laboratories, Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Marion M. Brooke, Sc.D.
Alan W. Donaldson, Sc.D.
Paul L. Guptill, M.A.
Lois Norman, A.B.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Laboratory personnel receive intensive practice in determining unknown parasitic specimens.

TYPE OF TRAINING:

Materials for teaching are made available through importation of fresh parasitic materials from tropical countries, as well as from many sources in this country. Preserved materials and permanent slide preparations also are used. Various organisms are maintained in cultures and laboratory animals. The student is made thoroughly familiar with the diagnostic stages of parasites and laboratory procedures by repeated drilling with unknown specimens. Lectures and discussion sessions emphasize the values and limitations of the available diagnostic procedures. This class is limited to 22 students.

OUTLINE OF COURSE:

First Week	Characteristics of Diagnostic Stages (Amebae, other protozoa, nematodes, cestodes, and trematodes)
Second and Third Weeks	Laboratory Diagnostic Techniques Intestinal Parasitic Diseases of Major Importance Practice in Examination of Stool Specimens (Practice specimens, unknowns, and finals)

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

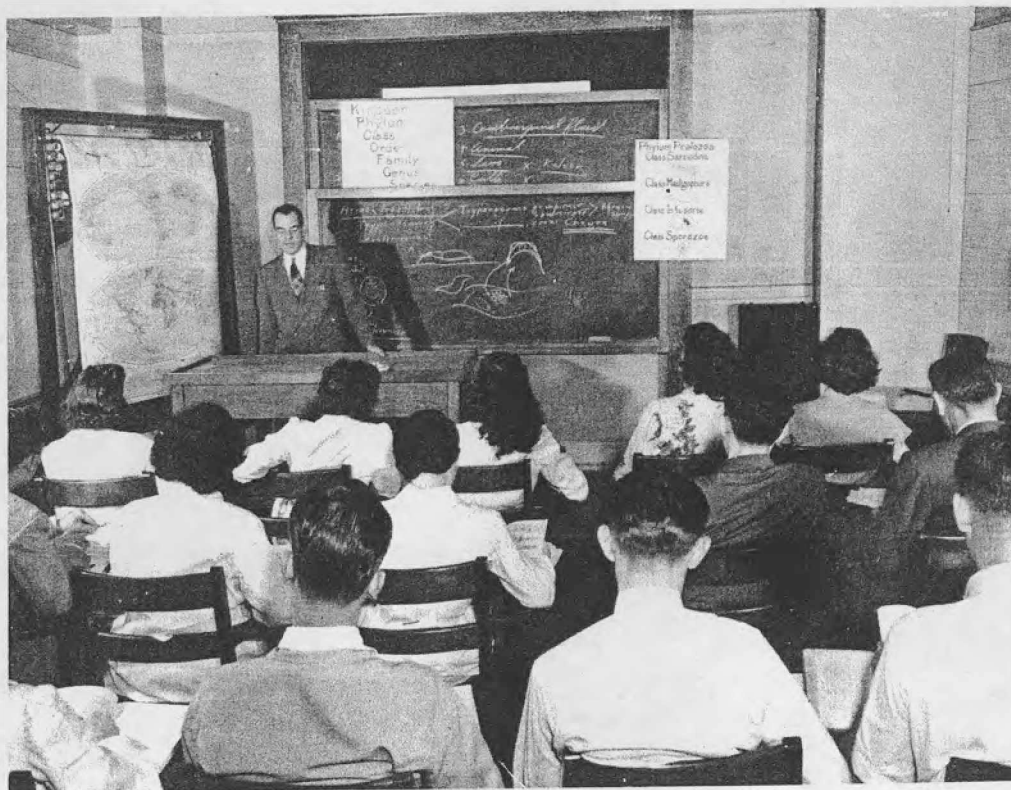
LABORATORY DIAGNOSIS OF PARASITIC DISEASES

PART 2. BLOOD PARASITES (8.01-8)

DATES: March 26 to April 13, 1951
September 24 to October 12, 1951

LOCATION: Parasitology and Mycology Laboratories, Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Marion M. Brooke, Sc.D.
Alan W. Donaldson, Sc.D.
Harry D. Pratt, Ph.D.
Paul L. Guptill, M.A.
Lois Norman, A.B.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Class lecture in diagnostic stages of hemoflagellates.

TYPE OF TRAINING:

The characteristics of the blood parasites are studied in fresh blood from laboratory animals, mounts from cultures, stained blood films, and other permanent preparations. Practice is obtained in performance of laboratory procedures. Unknown specimens are used to develop proficiency in identification of organisms. Lectures and discussion sessions emphasize the values and limitations of available diagnostic procedures. This class is limited to 22 students.

OUTLINE OF COURSE:

First Week	Characteristics of Diagnostic Stages (Malaria parasites, trypanosomes, leishmanias, filarial worms)
Second and Third Weeks	Laboratory Diagnostic Techniques Blood Parasite Diseases of Major Importance Arthropods of Medical Importance Practice in Examination of Blood Specimens (Practice specimens, unknowns, and finals)

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

LABORATORY DIAGNOSIS OF MALARIA (8.05-8)

DATES: By special arrangement only

LOCATION: Parasitology and Mycology Laboratories, Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Marion M. Brooke, Sc.D.
Alan W. Donaldson, Sc.D.
Paul L. Guptill, M.A.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Mass staining of blood films.

TYPE OF TRAINING:

The diagnostic characteristics of the malaria parasites of man are studied intensively in stained thin and thick blood films. Training is given in the preparation and staining of blood films. Proficiency is developed by the examination and study of unknown specimens.

OUTLINE OF COURSE:

First Week	Characteristics of Diagnostic Stages of Thin and Thick Blood Films (<i>Plasmodium vivax</i> , <i>P. malariae</i> , <i>P. falciparum</i> , and <i>P. ovale</i>)
Second Week	Preparation and Staining of Blood Films Practice in Examination of Thin and Thick Blood Films (Malarial unknowns and finals)

OTHER INFORMATION:

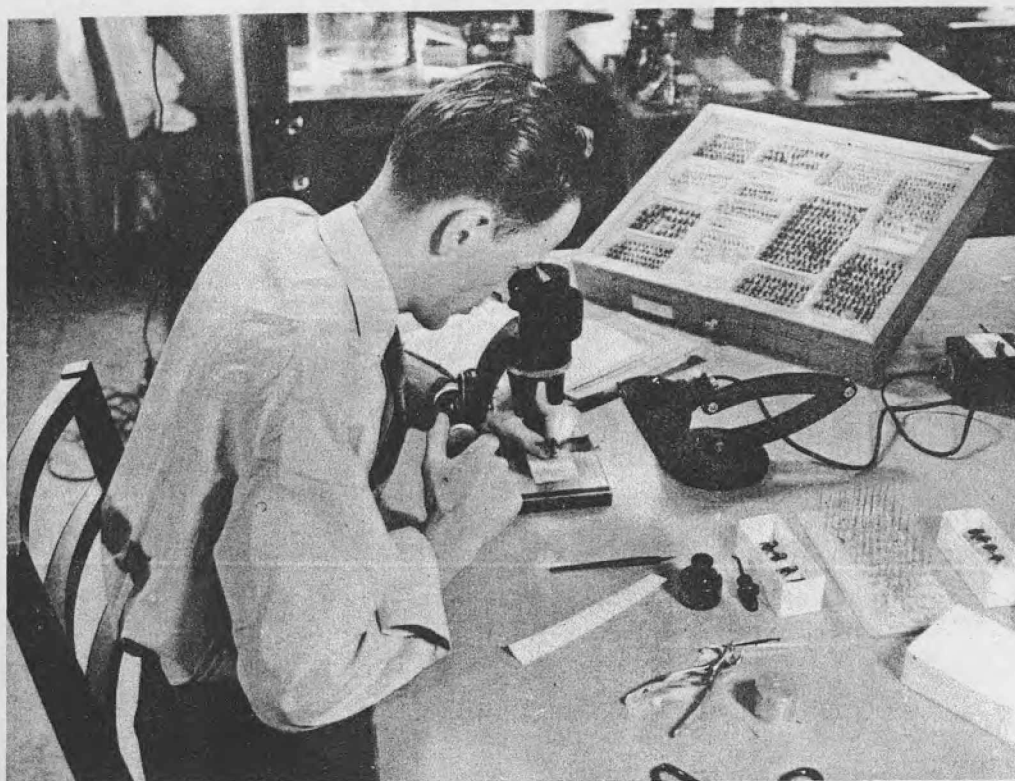
Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

IDENTIFICATION OF MEDICALLY IMPORTANT ARTHROPODS (8.10-8)

DATES: By special arrangement only

LOCATION: Parasitology and Mycology Laboratories, Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Harry D. Pratt, Ph.D.
Roy W. Chamberlain, Sc.D.
John E. Lane, B.S.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Student identifying unknown specimens.

TYPE OF TRAINING:

The characteristics of arthropods of medical importance are studied from live specimens, slide preparations, and preserved materials. Practice is obtained in the various techniques of mounting and preparing many types of arthropods for study and identification, such as adult and larval mosquitoes, fly larvae, fleas, ticks, and other ectoparasites. Unknown specimens are used to develop proficiency in identification of various species. Lectures and discussion sessions emphasize diagnostic characteristics, literature dealing with identification, and to a lesser extent, life histories and importance in disease transmission.

OUTLINE OF COURSE:

First Week	Characteristics of Diagnostic Stages (Crustacea, ticks, mites, cockroaches, lice, true bugs, fleas) Methods of Preparing Specimens for Identification
Second Week	Characteristics of Diagnostic Stages (Mosquito larvae and adults, biting flies, fly larvae, muscoid flies) Practice in Examination of Arthropods (Practice specimens, unknowns, and finals)

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

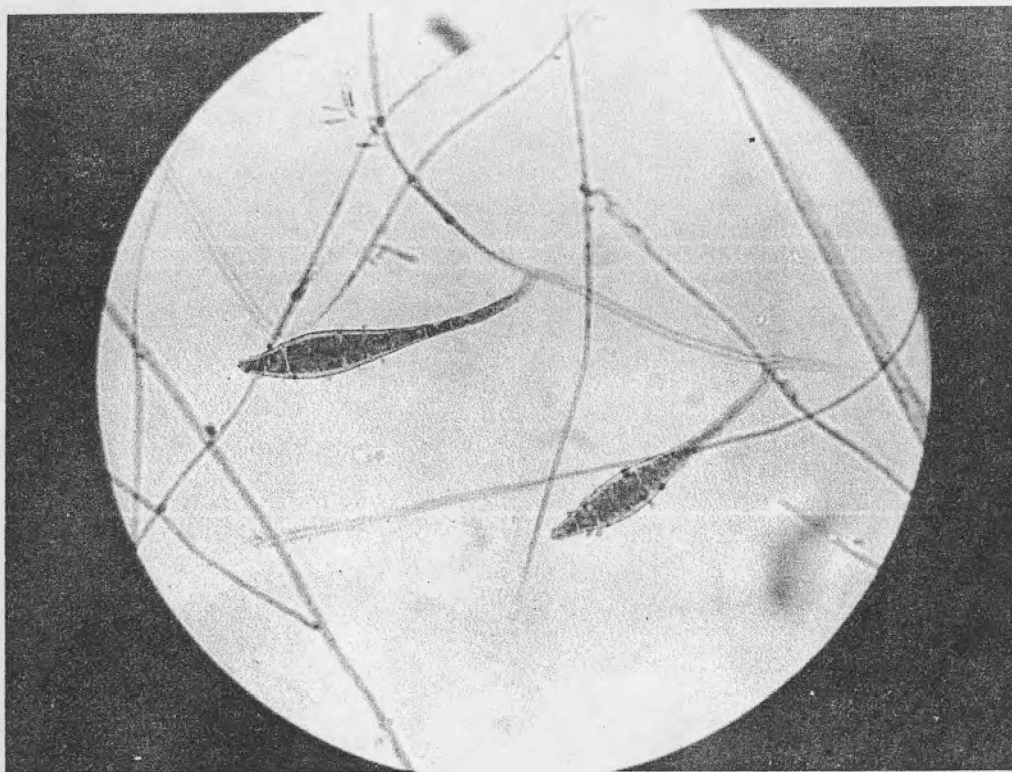
LABORATORY DIAGNOSIS OF MYCOTIC DISEASES

PART 1. CUTANEOUS AND SUBCUTANEOUS FUNGI (8.15-8)

DATES: April 16-27, 1951
November 5-16, 1951

LOCATION: Parasitology and Mycology Laboratories, Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Libero Ajello, Ph.D.
Lucille K. Georg, Ph.D.
Morris A. Gordon, Ph.D.
Calomira Papageorge, B.S.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Microsporium canis Macroconidia.

TYPE OF TRAINING:

Students are introduced to the fundamentals of general mycology and acquainted with the position of fungi in the plant kingdom. Study of common saprophytes enables the students to recognize contaminants and to become familiar with techniques used in the study of pathogenic fungi. The fungi causing cutaneous and subcutaneous diseases are studied in tissue and in culture. In lecture, the clinical aspects of these diseases are discussed and illustrated. Students are taught, by lecture and laboratory work, methods of diagnosis including culturing, animal inoculation, biochemical tests and other procedures. Materials supplied to students consist of cultures of the pathogenic fungi, cultures of common saprophytes, histological preparations, fresh clinical material when available, infected laboratory animals for study, laboratory manual, and necessary laboratory equipment. This class is limited to 22 students.

OUTLINE OF COURSE:

Identification of common saprophytes
(*Aspergillus*, *Penicillium*, *Alternaria*, etc.)

Identification and culturing of the dermatophytes
(*Trichophyton*, *Microsporum*, *Epidermophyton*)

Identification and culturing of the subcutaneous fungi
(*Sporotrichum*, *Phialophora*, *Allescheria*, etc.)

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

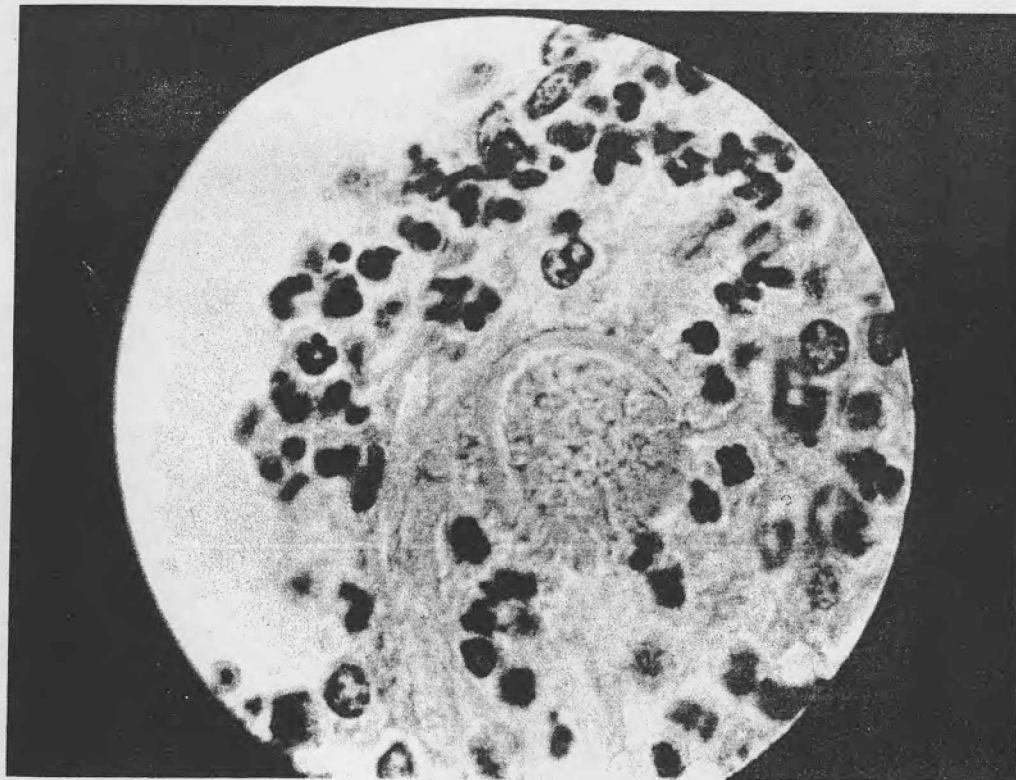
LABORATORY DIAGNOSIS OF MYCOTIC DISEASES

PART 2. SYSTEMIC FUNGI (8.16-8)

DATES: April 30 to May 11, 1951
November 19-30, 1951

LOCATION: Parasitology and Mycology Laboratories, Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Libero Ajello, Ph.D.
Lucille K. Georg, Ph.D.
Morris A. Gordon, Ph.D.
Calomira Papageorge, B.S.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Tissue phase of *Coccidioides immitis*.

TYPE OF TRAINING:

The fungi causing systemic infections in man are studied in tissue and in culture. In addition, the clinical aspects of the systemic mycoses are discussed and illustrated. Methods of diagnosis involving isolation techniques, culturing, animal inoculation, biochemical, and other procedures are taught, used, and demonstrated. Materials supplied to students consist of cultures of the fungi causing systemic infection, histological preparations, fresh clinical material when available, infected laboratory animals for study, laboratory manual, and necessary laboratory equipment. This class is limited to 22 students.

OUTLINE OF COURSE:

Identification and culturing of the pathogenic fungi causing systemic diseases in man
(*Actinomyces bovis*, *Blastomyces dermatitidis*, *Coccidioides immitis*, etc.)

Discussion of the incidence and geographic distribution of the mycoses

Discussion of serologic procedures in medical mycology and their use

ELIGIBILITY:

Applicants for Part 2 are required to have completed Part 1 of the Laboratory Diagnosis of Mycotic Diseases or to have its equivalent in training or experience.

OTHER INFORMATION:

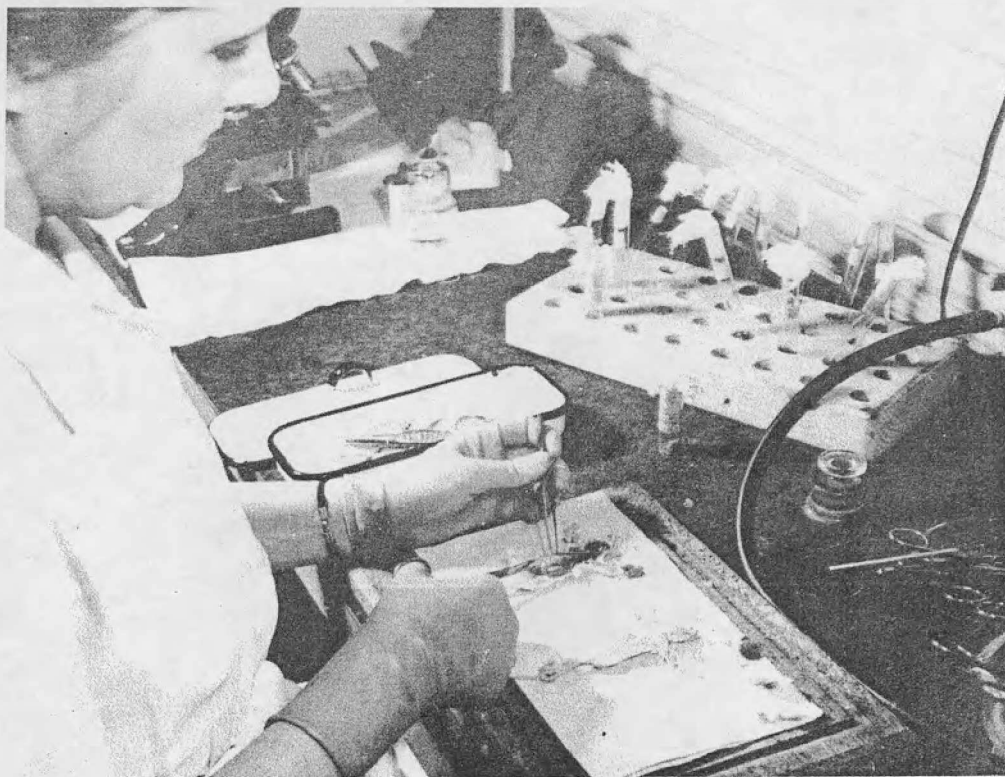
Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

LABORATORY DIAGNOSIS OF VIRUS DISEASES (B.20-9)

DATES: April 16 to May 11, 1951
September 3-28, 1951

LOCATION: Virus and Rickettsia Laboratories, Laboratory Services, Communicable Disease Center, Montgomery, Ala.

STAFF: Morris Schaeffer, M.D., Ph.D.
Thomas P. Hughes, M.P.H., Ph.D.
Matthew A. Bucca, Ph.D.
Robert E. Kissling, D.V.M.
Roy W. Chamberlain, Sc.D.
Earl H. Arnold, C.E., M.S.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Examination of mice following virus inoculations.

TYPE OF TRAINING:

This 4-week course is designed to familiarize the students with the common techniques and methods of the laboratory diagnosis of virus diseases by discussions, demonstrations, and laboratory exercises.

OUTLINE OF COURSE:

This course consists of two parts. The first part is a theoretical and practical consideration of the commoner techniques, including immunology, pathology, and epidemiology. The second part includes the application of these techniques by actual participation in the routine and field work of the laboratory. Students also are expected to identify an unknown virus and to make a serologic diagnosis from a set of paired serum specimens.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

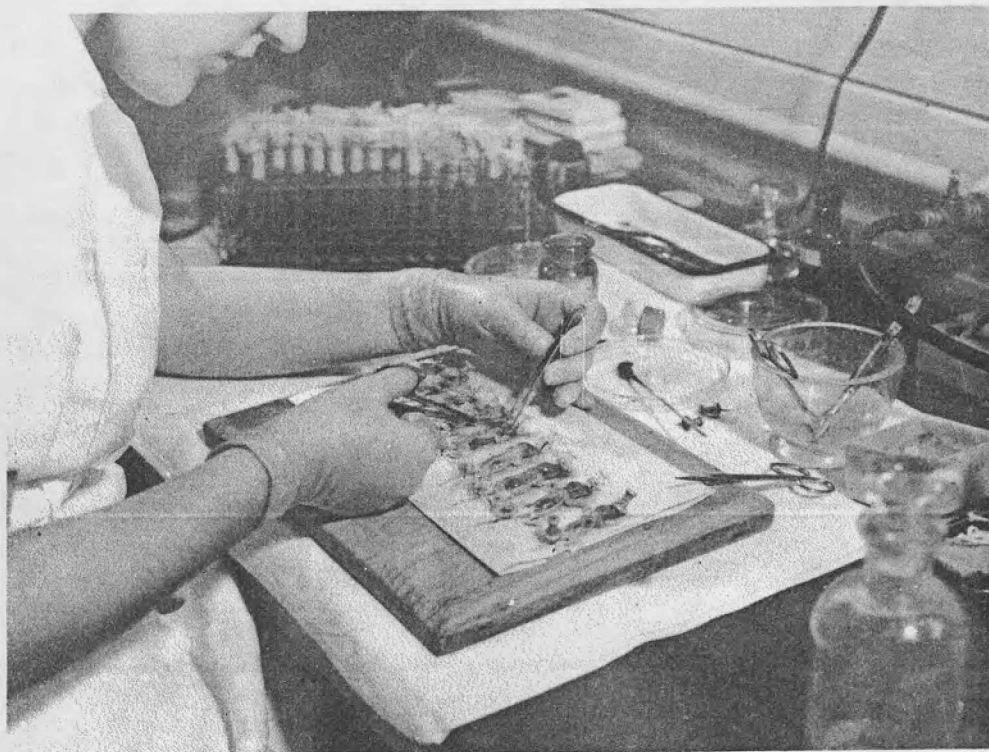
VIRUS ISOLATION AND IDENTIFICATION TECHNIQUES

(8.21-9)

DATES: By special arrangement only

LOCATION: Virus and Rickettsia Laboratories, Laboratory Services, Communicable Disease Center, Montgomery, Ala.

STAFF: Morris Schaeffer, M.D., Ph.D.
Thomas P. Hughes, M.P.H., Ph.D.
Rachel Gorrie, A.B.
Robert E. Kissling, D.V.M.
Roy W. Chamberlain, Sc.D.
Matthew A. Bucca, Ph.D.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Harvesting of the central nervous system tissues from mice infected with a neurotropic virus.

TYPE OF TRAINING:

This is a special course open only to a limited number of students who are qualified and who subsequently plan to engage in virus work in their own laboratories. Two to 4 weeks are devoted to personal instruction by members of the staff with whom the students work closely. An attempt is made to have the student learn and perform the common techniques employed in a virus laboratory.

ELIGIBILITY:

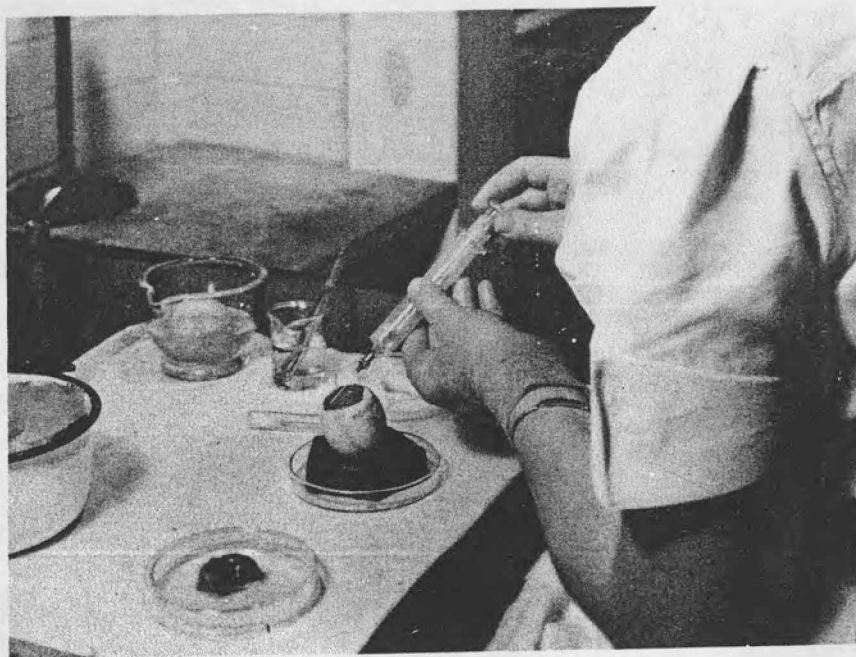
Registration for this course is restricted to those who have completed course 8.20-9 "Laboratory Diagnosis of Virus Diseases," or those who have had equivalent experience.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

LABORATORY DIAGNOSIS OF INFLUENZA (8.25-9)

DATES:	By special arrangement only
LOCATION:	Virus and Rickettsia Laboratories, Laboratory Services, Communicable Disease Center, Montgomery, Ala.
STAFF:	Morris Schaeffer, M.D., Ph.D. Thomas P. Hughes, M.P.H., Ph.D. Rachel Gorrie, A.B. Matthew A. Bucca, Ph.D. Guest lecturers, consultants, and staff members of the Communicable Disease Center



Removal of allantoic fluid from embryonated egg used for isolation of influenza virus.

TYPE OF TRAINING:

The course is devoted to the study and practice of laboratory procedures at present available for the detection of influenza virus infections. In addition, the students are guided by demonstrations and discussions. This class is limited to 12 students.

OUTLINE OF COURSE:

The first part is devoted to demonstration and practice in the techniques of red blood cell agglutination test, complement fixation test, egg candling, fertile egg inoculation of virus by allantoic and anniotic routes, and the hemagglutination inhibition test.

The second part covers methods of obtaining throat washings, the isolation of unknown viruses, practice with egg inoculation, agglutination tests, strain determinations, etc.

OTHER INFORMATION:

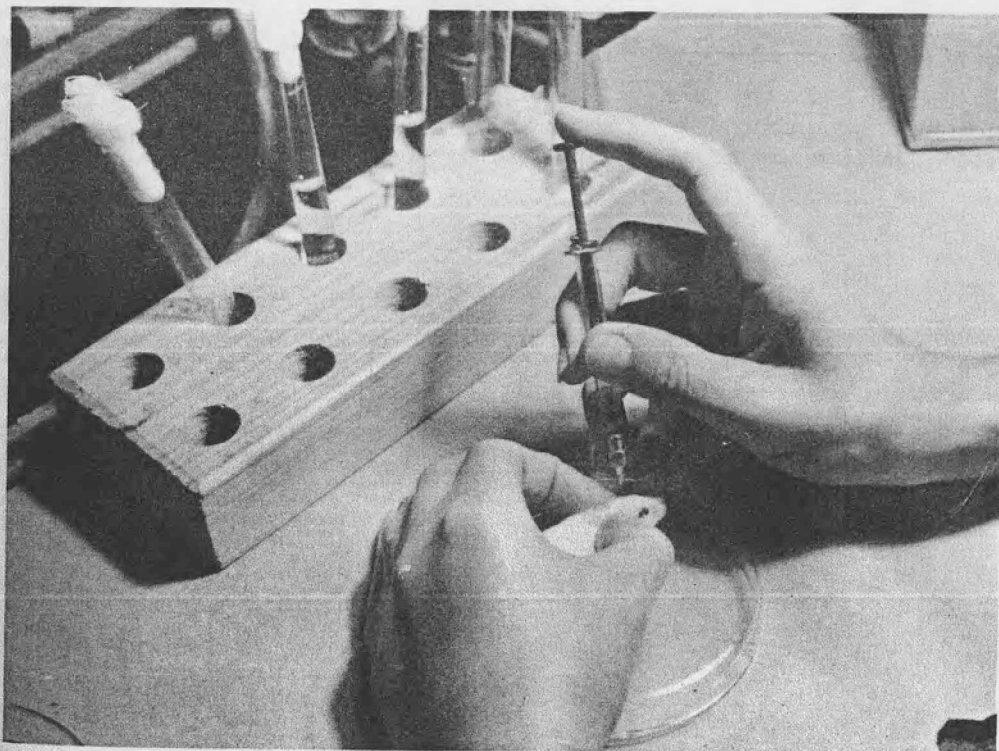
Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

LABORATORY DIAGNOSIS OF RABIES (8.26-9)

DATES: May 14-18, 1951
October 1-5, 1951

LOCATION: Virus and Rickettsia Laboratories, Laboratory Services, Communicable Disease Center, Montgomery, Ala.

STAFF: Ernest S. Tierkel, V.M.D., M.P.H.
Robert E. Kissling, D.V.M., M.S.
Harry Rubin, D.V.M.
Martha E. Eidson
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Intracerebral mouse inoculation for the diagnosis of rabies.

TYPE OF TRAINING:

The course is essentially practical laboratory training, enabling the students to carry out the various procedures themselves to insure proficiency. It is supplemented by lectures and demonstrations. This class is limited to 12 students.

OUTLINE OF COURSE:

First Day	Discussion, background, and orientation Preparation of stains
Second Day	Techniques for gross brain dissection (dog and other species) Tissue application and staining
Third day	Mouse inoculation and symptomatology Mouse brain preparation and staining
Fourth Day	Microscopy - the Negri body and differential diagnosis - other inclusion bodies
Fifth Day	Cost and materials Review and unknowns

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

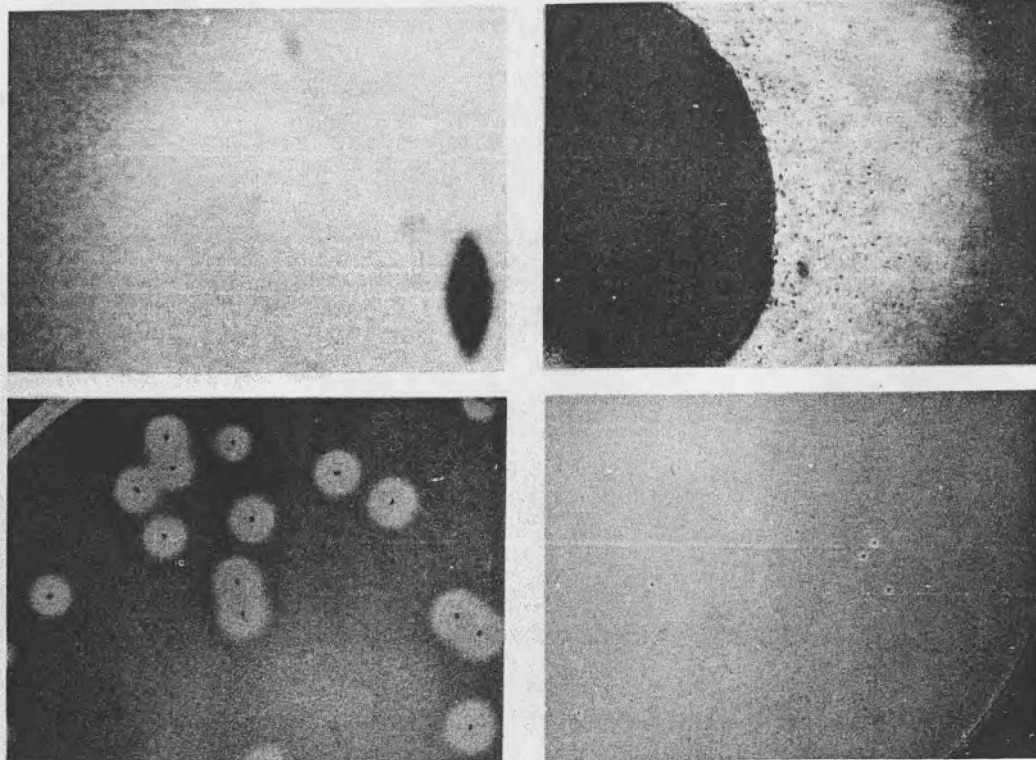
LABORATORY DIAGNOSIS OF BACTERIAL DISEASES

GENERAL BACTERIOLOGY, PART 1. (8.40-8)

DATES: February 26 to March 9, 1951
August 27 to September 7, 1951

LOCATION: Bacteriology Laboratories, Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Martin Frobisher, Jr., Sc.D.
Elaine L. Updyke, Sc.D.
Martha K. Ward, Sc.D.
Margaret I. Nickle, M.S.
Elizabeth Conroy, M.S.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Colonies of alpha and beta hemolytic streptococci in blood agar. LOWER LEFT, beta type, natural size. UPPER LEFT, beta type (X 20). LOWER RIGHT, alpha type, natural size. UPPER RIGHT, alpha type (X about 100). Compare the clear beta zone with the cell-filled alpha zone.

TYPE OF TRAINING:

The course is intended to acquaint the student with approved and accepted methods for laboratory diagnosis of important communicable diseases and to develop his proficiency in this work. The course includes lectures, demonstrations, quizzes, seminars, and discussions. In the laboratory, entire procedures are carried through and as many unknowns as possible are worked out, thus giving the student valuable experience. This class is limited to 22 students.

OUTLINE OF COURSE:

The work centers around four groups of organisms and methods for isolating and identifying them in the laboratory. The first exercises deal with the streptococci and procedures in blood-agar typing and serologic grouping. This is followed by a study of the *Hemophilus* group including *H. pertussis*, *parapertussis*, etc. In the second week of the course, detailed attention is given to the pathogenic spirochetes (except *Treponema*) and to an important but not widely known group, the tribe Mimeae. Various demonstrations and lectures on additional related topics along with oral discussions and seminars round out the course.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

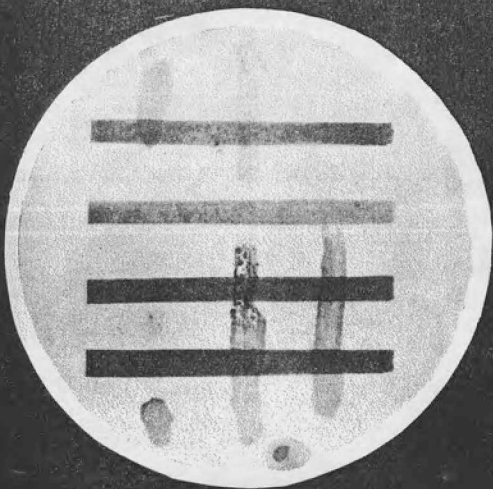
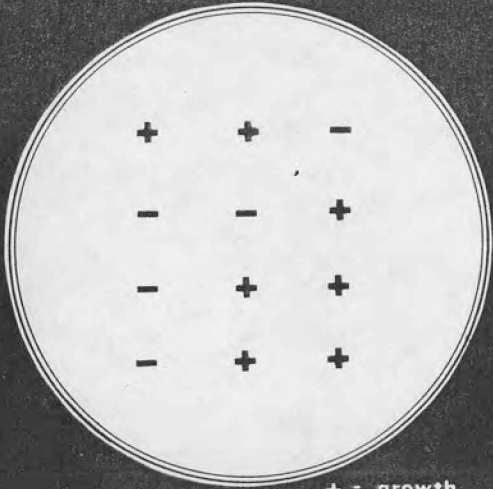
LABORATORY DIAGNOSIS OF BACTERIAL DISEASES

GENERAL BACTERIOLOGY, PART 2. (B.41-8)

DATES: March 12-23, 1951
September 10-21, 1951

LOCATION: Bacteriology Laboratories, Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Martin Frobisher, Jr., Sc.D.
Elizabeth I. Parsons, Sc.D.
Joseph H. Schubert, Ph.D.
Elizabeth O. King, M.S.
Guest lecturers, consultants, and staff members of the Communicable Disease Center

SPECIES			SPECIES		
<i>suis</i>	<i>melitensis</i>	<i>abortus</i>	<i>suis</i>	<i>melitensis</i>	<i>abortus</i>
					
Growth with:					
THIONIN			+	+	-
PYRONIN			-	-	+
CRYSTAL VIOLET			-	+	+
BASIC FUCHSIN			-	+	+
			+ = growth - = no growth		

Cruickshank method of determining dye sensitivity of *Brucella* species.

TYPE OF TRAINING:

As in Part 1 of this course, the lecture and conference-room is much used for formal and informal talks, discussions, and quizzes. In the laboratory the newest and best available methods for the indicated purposes are demonstrated, and the student has ample opportunity to try out the procedures on practice specimens and unknowns so that he should gain some familiarity with them. This class is limited to 22 students.

OUTLINE OF COURSE:

The first part of the course is devoted mainly to demonstrations of methods for isolation and identification of *Corynebacterium diphtheriae*. The isolations are followed up by type and virulence determinations using animal methods and the *in vitro* procedure. The student has ample opportunity to examine "unknown" smears and cultures and gain useful experience with morphological and cultural diagnosis of diphtheria.

Later in the course the genus *Neisseria* is studied, with special reference to neisserian infection of the genitourinary tract, including isolation and identification of the infecting agents.

Details are given concerning new methods for cultural and serologic diagnosis of brucellosis, with work on several "unknowns."

The problems of food intoxication also are taken up during this course, with demonstrations and exercises in anaerobic methods, isolation of *Clostridium botulinum*, identification of botulinal toxin, and preparation of staphylococcal toxin.

Incidental lectures on various topics, and demonstrations of procedures of general interest to laboratory workers round out the program.

OTHER INFORMATION:

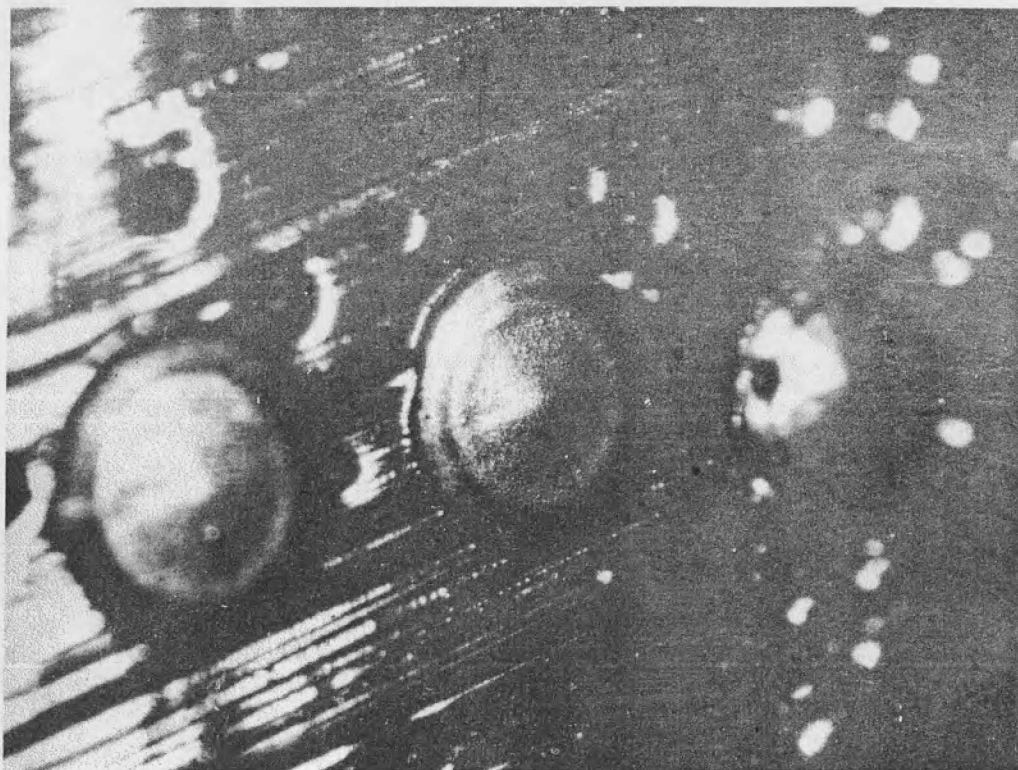
Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

TYPING OF CORYNEBACTERIUM DIPHTHERIAE (8.42-8)

DATES: By special arrangement only

LOCATION: Bacteriology Laboratories, Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Elizabeth I. Parsons, Sc.D.
Elizabeth O. King, M.S.
Olive A. Simmons, B.S.



One form of gravis type colony of *C. diphtheriae*.

TYPE OF TRAINING:

This course consists of work in the Diphtheria Laboratory and covers all the steps incidental to determination of types of *C. diphtheriae*. These include preparation of materials and seed cultures, methods of inoculation, reading of hemolysin tests, pellicle formation, colony form and fermentation tests. An opportunity is provided also for observation of routine procedures in diagnostic diphtheriology. This class is limited to 2 students.

ELIGIBILITY:

Satisfactory completion of Laboratory Diagnosis of Bacterial Diseases, General Bacteriology, Part 2, or equivalent experience in laboratory diagnosis of diphtheria.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

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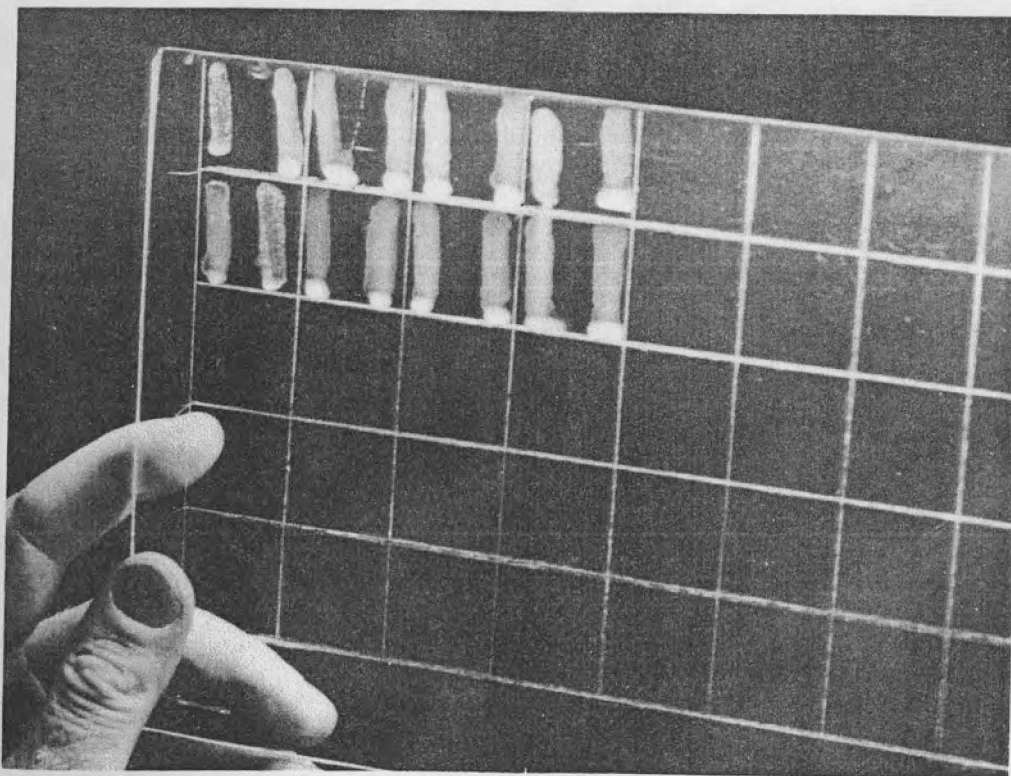
LABORATORY DIAGNOSIS OF ENTERIC DISEASES

PART 1. INTRODUCTORY ENTERIC BACTERIOLOGY (8.50-8)

DATES: March 26-30, 1951
September 24-28, 1951

LOCATION: Bacteriology Laboratories, Laboratory Services, Communicable Disease Center,
Chamblee, Ga.

STAFF: Philip R. Edwards, Ph.D.
William H. Ewing, Ph.D.
Mary G. West, M.S.
Guest lecturers, consultants, and staff members of the Communicable Disease
Center



Tests for *Salmonella* O antigens.

TYPE OF TRAINING:

The course is designed for students who desire instruction in the fundamental aspects of enteric bacteriology. Attention is given to proper methods of collection of specimens, their preservation, and inoculation into differential, selective, and enrichment media. Students inoculate media with known and unknown specimens, make isolations, and maintain and identify the significant bacteria. Various biochemical tests used for delineation of members of the several genera of enteric bacteria are stressed. Serologic grouping of the bacteria into their respective genera through the use of polyvalent serums is studied. Specific identification of serologic types is not attempted in this course. This class is limited to 22 students.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

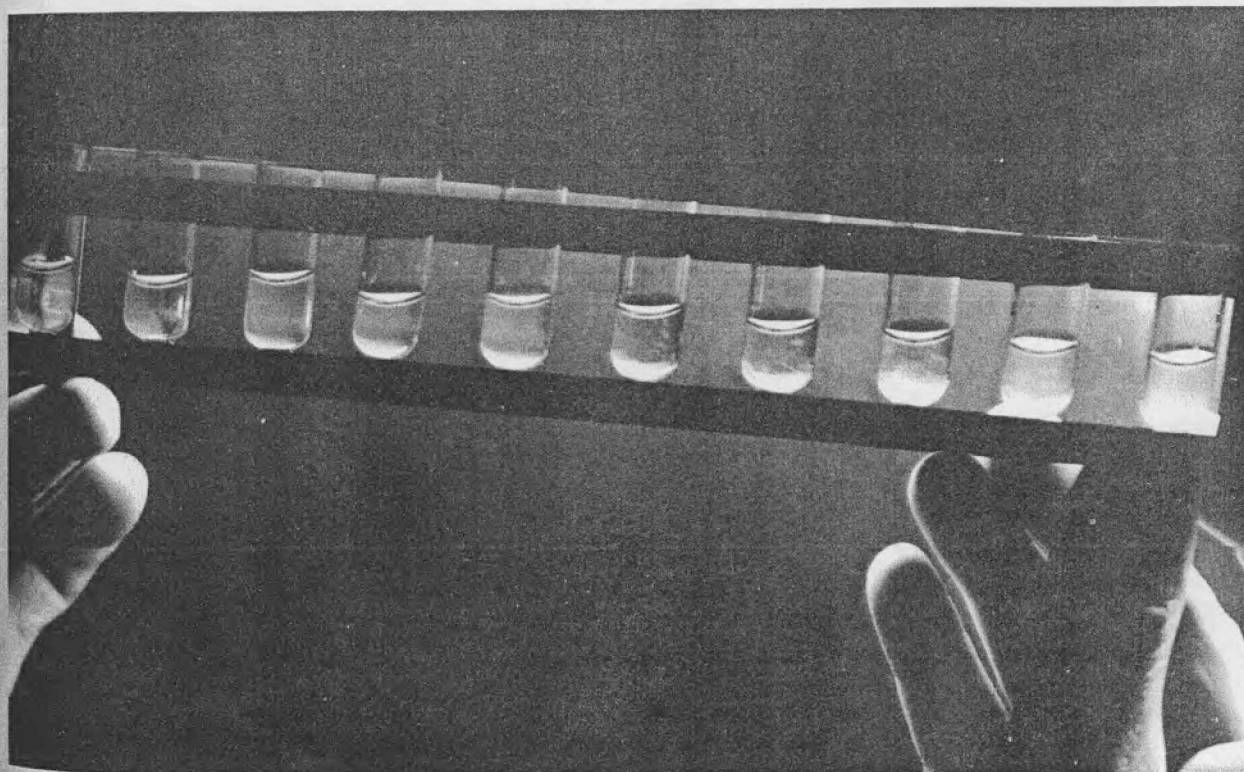
LABORATORY DIAGNOSIS OF ENTERIC DISEASES

PART 2. ADVANCED ENTERIC BACTERIOLOGY (8.51-8)

DATES: April 2-13, 1951
October 1-12, 1951

LOCATION: Bacteriology Laboratories, Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Philip R. Edwards, Ph.D.
William H. Ewing, Ph.D.
Mary G. West, M.S.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Positive and negative H agglutinations.

TYPE OF TRAINING:

This course is designed to follow Part 1 of Enteric Bacteriology and is intended primarily for persons who have had considerable laboratory experience in enteric bacteriology and who desire instruction in the details of serologic typing of *Shigella* and *Salmonella*. The 2 weeks are devoted to an intensive study of these problems. Certain paracolon and coliform groups, the serology of which is known, also are considered.

The work includes serologic study of various micro-organisms using unabsorbed and absorbed typing serums. Methods of preparation of specific serums for antigenic analysis are considered. The variational phenomena which affect serologic typing are stressed. This class is limited to 22 students.

ELIGIBILITY:

Satisfactory completion of Part 1 of Enteric Bacteriology, or its equivalent in experience.

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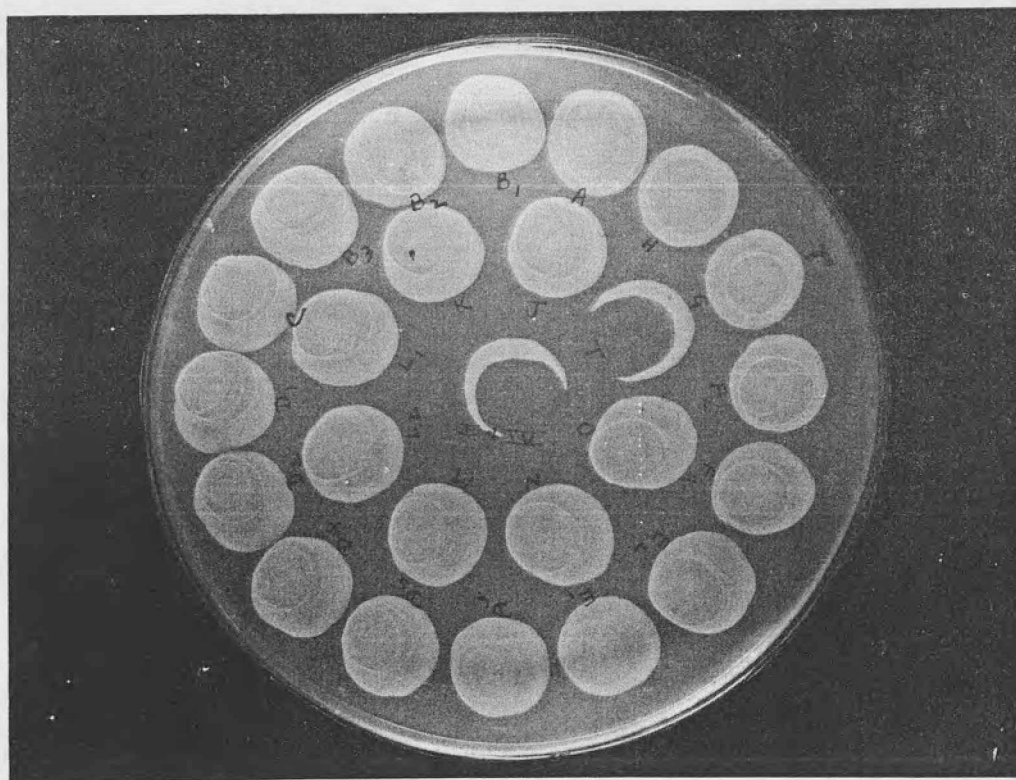
Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

PHAGE TYPING OF *SALMONELLA* TYPHOSA (8.52-8)

DATES: By special arrangement only

LOCATION: Bacteriology Laboratories, Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Philip R. Edwards, Ph.D.



Bacteriophage typhing of *Salmonella typhosa*.

TYPE OF TRAINING:

Special instruction is offered in the use of specific bacteriophages in the typing of *S. typhosa*. The exercises cover about 1 week and are designed for persons of broad experience in enteric bacteriology who are familiar with the characteristics and handling of *S. typhosa* and who wish to engage in phage typing of that organism.

Instruction in phage typing is given only by special arrangement. This class is limited to 2 students.

ELIGIBILITY:

Satisfactory completion of Parts 1 and 2 of Enteric Bacteriology or its equivalent in experience.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

LABORATORY DIAGNOSIS OF TUBERCULOSIS (8.55-8)

OFFERED IN COOPERATION WITH THE DIVISION OF TUBERCULOSIS,
BUREAU OF STATE SERVICES, U. S. PUBLIC HEALTH SERVICE

DATES: April 16-27, 1951
April 30 to May 11, 1951
November 5-16, 1951
November 19-30, 1951

LOCATION: Bacteriology Laboratories, Laboratory Services, Communicable Disease Center,
Chamblee, Ga.

STAFF: Robert A. Patnode, M.S.
George C. Klein, B.A.
Jerrydean H. Robinson, B.S.
Conradine Riddle, B.A.
Joseph H. Kite, B.A.
F. J. Wilson, B.S.
Guest lecturers, consultants, and staff members of the Communicable Disease
Center



Testing tuberculosis cultures for streptomycin sensitivity.

TYPE OF TRAINING:

The course emphasizes practical laboratory training in all phases of tuberculosis bacteriology, including preparation of culture media, microscopy, cultural procedures, diagnostic use of animals, and testing of drug sensitivity. Ample pathologic material is provided to enable each student to develop proficiency in performing the various techniques. The laboratory exercises are supplemented by demonstrations, lectures, discussion periods, and frequent practical and written examinations. This class is limited to 22 students.

OUTLINE OF COURSE:

Preparation of Culture Media Practice in making currently recommended diagnostic media.
Microscopic Techniques Training in preparation and staining of smears and the interpretation of microscopic findings. Demonstrations of various staining procedures, including fluorescent microscopy. Examination and interpretation of "unknown" smears.
Cultural Techniques Demonstrations and training in various digestion and concentration methods for sputum, gastric washings, and other body fluids, with particular emphasis on interpretation of cultural findings. Training in identification of types of organisms by their colony morphology. Includes practice in subculture techniques and the isolation of tubercle bacilli from animal tissues.
Diagnostic Use of Animals Training in techniques of inoculation and autopsy of guinea pigs, rabbits, and chickens. Preparation and standardization of suspensions of tubercle bacilli for animal inoculation. Tuberculin testing of animals.
Sensitivity Testing Training in testing the sensitivity of tubercle bacilli to streptomycin and para-aminosalicylic acid.

TUBERCULIN TEST:

It is desirable that students be tuberculin positive. Tuberculin negative individuals who come for the training will assume all responsibility of possible conversion to tuberculin positivity.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

LABORATORY DIAGNOSIS OF SYPHILIS (8.72-8)

FOR SENIOR LABORATORY TECHNICIANS AND QUALIFIED WORKERS
IN THE FIELD OF SEROLOGY

OFFERED IN COOPERATION WITH THE DIVISION OF VENEREAL DISEASE,
BUREAU OF STATE SERVICES, U. S. PUBLIC HEALTH SERVICE

DATES: February 12-23, 1951
March 12-23, 1951
April 16-27, 1951
June 4-15, 1951
September 10-21, 1951
October 22 to November 2, 1951

LOCATION: Venereal Disease Research Laboratory, Communicable Disease Center, Buildings
No. 23 and No. 24, Chamblee, Ga.

STAFF: Sidney Olansky, M.D., Director, Venereal Disease Research Laboratory
Ad Harris, Chief, Serology Section
Hilfred N. Bossak, B.S.
William P. Duncan, B.S.



Trainees performing serologic tests for syphilis.

TYPE OF TRAINING:

The course is designed to acquaint the student with all of the accepted American methods for the serodiagnosis of syphilis, including the latest developments or modifications of technique by the author serologists. This course includes lectures, demonstrations, quizzes, and discussions, in addition to the performance of the test procedures by the students.

This course is designed primarily to meet the needs of senior operating personnel from State laboratories, health departments, and government installations, including duly accredited representatives from other countries in this and other hemispheres, who desire refresher rather than fundamental training in new techniques or recent modifications of established methods. This class is limited to 6 students.

OUTLINE OF COURSE:

First Week The first week of the course is devoted to discussion, demonstration, and performance, by the student of the most commonly employed complement fixation tests for the serodiagnosis of syphilis. Each trainee is required to perform the necessary titrations of reagents, in addition to qualitative and quantitative tests on serum and spinal fluid specimens, employing both lipoidal and cardiolipin-lecithin antigens.

Second Week During the second week, discussions and performances by the student of the most widely used micro- and macro-flocculation tests on serum and spinal fluid specimens, employing both lipoidal and cardiolipin-lecithin antigens, are carried out.

The Filter Paper Microscopic (FPM) test, a method designed to test dried blood samples collected on filter paper also is demonstrated.

Other serodiagnostic tests on spinal fluid, such as the quantitative turbidimetric determination of total protein, and the colloidal gold reaction, are considered.

Supplementary lectures on the standardization of serologic reagents, cardiolipin-lecithin antigens, the Nelson Spirochetal Immobilization Test, serologic discrepancies and the clinical application of laboratory findings, complete the course.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

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PREPARATION AND STANDARDIZATION OF SEROLOGIC REAGENTS USED IN THE LABORATORY DIAGNOSIS OF SYPHILIS (8.73-8)

FOR SENIOR LABORATORY WORKERS RESPONSIBLE FOR
MANUFACTURING SEROLOGIC REAGENTS

OFFERED IN COOPERATION WITH THE DIVISION OF VENEREAL DISEASE,
BUREAU OF STATE SERVICES, U. S. PUBLIC HEALTH SERVICE

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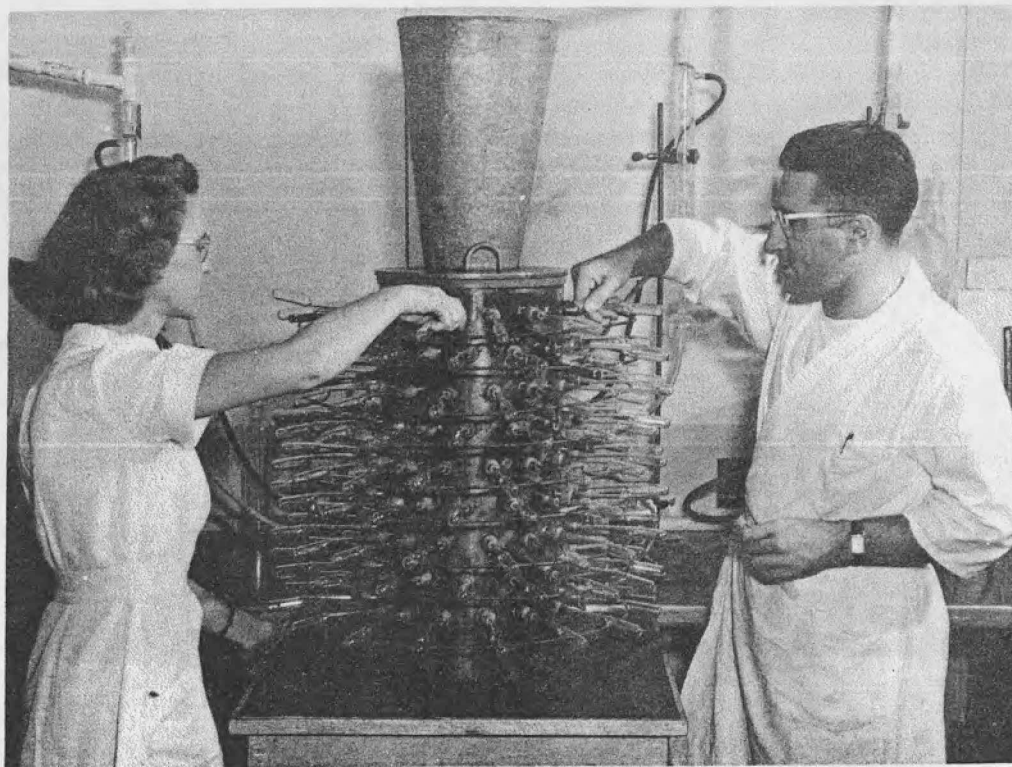
DATES: November 5-23, 1951 or by special arrangement

LOCATION: Venereal Disease Research Laboratory, Communicable Disease Center, Buildings
No. 23 and No. 24, Chamblee, Ga.

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STAFF: Hilfred N. Bossak, B.S.
Virginia L. Harding, B.S.
Thomas G. Tito, B.S.
William P. Duncan, B.S.



Dehydration of serum on lyophile apparatus.

TYPE OF TRAINING:

This 3-week course is designed to acquaint the student with the principles involved in the preparation and standardization of serologic reagents employed in the serodiagnosis of syphilis and includes actual preparation and subsequent adjustment to predetermined reactivity levels of sample lots of reagents. The content of the course may be modified or adjusted to meet the needs of selected groups or individuals.

Prerequisite training for participants in this course is attendance in refresher training course at Venereal Disease Research Laboratory listed under Laboratory Diagnosis of Syphilis (8.72-8) or equivalent. This class is limited to 6 students.

OUTLINE OF COURSE:

First Week	Preparation and standardization of reagents for complement fixation and flocculation tests for syphilis utilizing lipoidal antigens.
Second Week	Assembly and standardization of serologic antigens from cardiolipin and purified lecithin. Review of methods employed in the isolation and purification of cardiolipin and purified lecithins.
Third Week	Preparation and adjustment of control reagents for serologic tests (complement fixation and flocculation), total protein determinations, and others. Dehydration of guinea pig serum. Collection and preservation of sheep cells. Preparation of serum or spinal fluid specimens for use in interlaboratory evaluation surveys.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

SEROLOGIC DIAGNOSIS OF RICKETTSIAL DISEASES (8.75-8)

DATES: By special arrangement only

LOCATION: Bacteriology Laboratories, Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Joseph H. Schubert, Ph.D.
Sara Stanford, B.S.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Preparation of serum dilutions.

TYPE OF TRAINING:

The course is devoted to the study and practice of procedures and techniques presently available for the serologic diagnosis of rickettsial infections. The Weil-Felix and complement fixation tests are considered with respect to indications, advantages, techniques, conservation, and titration of reagents, and to the limitations inherent in the serologic approach to diagnosis. Students are given practice and experience in all the procedures involved in performing the tests. Unknown specimens are used extensively. This class is limited to 22 students.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

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CLINICAL CHEMISTRY

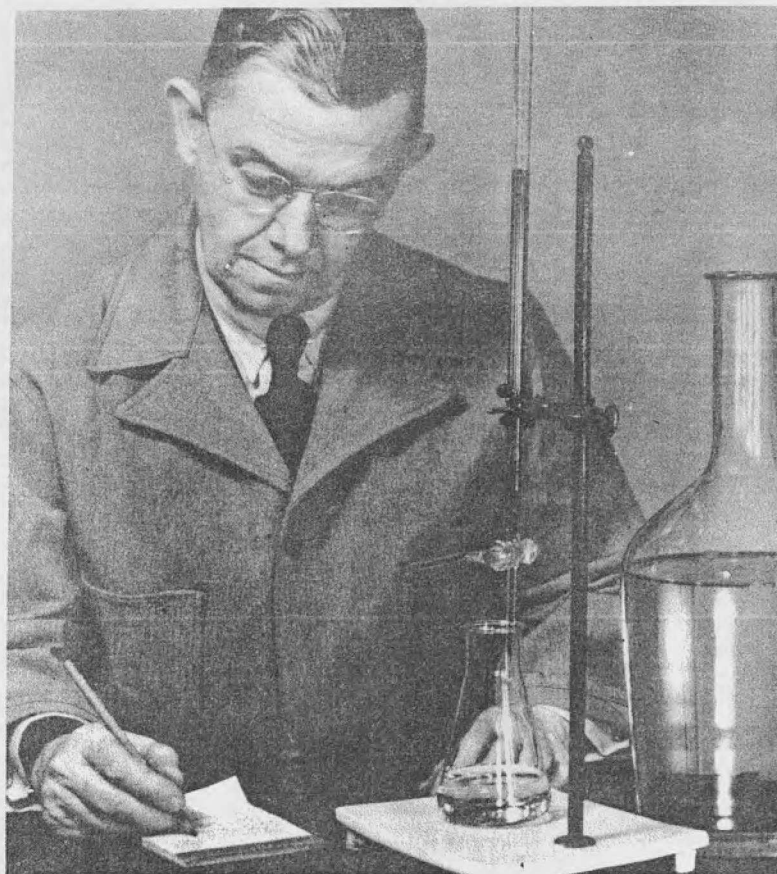
PART 1. INTRODUCTORY AND GENERAL PROCEDURES

(9.10-1)

DATES: May 14-18, 1951
October 29 to November 2, 1951

LOCATION: Clinical Pathology Laboratories, Laboratory Services, Communicable Disease Center, Atlanta, Ga.

STAFF: F. William Sunderman, M.D., Ph.D., and associates
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Acidimetry and alkalimetry.

TYPE OF TRAINING:

The training consists of lecture and laboratory work covering the basic procedures in clinical chemistry. This course is limited to 10 students.

OUTLINE OF COURSE:

Preparation of chemical solutions

Use of the balance

Calibration of volumetric apparatus

Use of spectroscope - its adaptation for identification of abnormal hemoglobin fragments and for fitting filters, etc.

Use of colorimeters - visual and photoelectric

Use of spectrophotometer

Collection of blood, blood serum, urine, feces, etc., for analysis

Use of preservatives, anticoagulants, etc.

Preparation of protein-free filtrates

Preparation of standard solutions - constant boiling and KMnO_4 , NH_4CNS , etc.

Conductivity measurements - their use in the examination of total base in serum, distilled water for intravenous solutions, etc.

Use of refractometer

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

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CLINICAL CHEMISTRY

PART 2. QUANTITATIVE ANALYSES (9.11-1)

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DATES: May 21 to June 1, 1951
November 5-16, 1951

LOCATION: Clinical Pathology Laboratories, Laboratory Services, Communicable Disease Center, Atlanta, Ga.

STAFF: F. William Sunderman, M.D., Ph.D., and associates
Guest lecturers, consultants, and staff members of the Communicable Disease Center

water



Measurement of total base in serum.

TYPE OF TRAINING:

The training consists of lecture and laboratory work in methodology of a number of quantitative chemical analyses. This course is limited to 10 students.

OUTLINE OF COURSE:

1. Blood sugar
2. Blood urea nitrogen
3. Blood nonprotein nitrogen
4. Blood creatinine
5. Serum uric acid
6. Serum total nitrogen (Kjeldahl, Pregl)
7. Serum protein (Biuret)
8. Serum albumin - globulin
9. Serum chlorides
10. Serum total CO₂
11. Serum cholesterol and cholesterol esters
12. Serum calcium
13. Serum inorganic phosphorus
14. Serum phosphatase - alkaline and acid
15. Serum bilirubin - van den Bergh
16. Serum total base - Sunderman
17. Serum sulfonamides
18. Serum PH measurements
19. Serum hemoglobin
20. Serum lipase: amylase

ELIGIBILITY:

Satisfactory completion of Clinical Chemistry, Part 1, or its equivalent in experience.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis " on page 19.

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ADVANCED QUANTITATIVE ANALYSES IN CLINICAL CHEMISTRY (9.12-1)

DATES:	By special arrangement only
LOCATION:	Clinical Pathology Laboratories, Laboratory Services, Communicable Disease Center, Atlanta, Ga.
STAFF:	F. William Sunderman, M.D., Ph.D., and associates Guest lecturers, consultants, and staff members of the Communicable Disease Center

TYPE OF TRAINING:

The training consists of lectures and laboratory work in methodology of a number of quantitative chemical analyses. The course is limited to 5 students.

OUTLINE OF COURSE:

Fluid and electrolyte equilibria

Blood volume

Extracellular volume

Osmotic pressure relationships

Hepatic function tests

Renal function tests

ELIGIBILITY:

Satisfactory completion of Clinical Chemistry, Part 1. Introductory and General Procedures, and Part 2. Quantitative Analyses, or their equivalent in experience.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

TOXICOLOGY (9.13-1)

DATES:	By special arrangement only
LOCATION:	Clinical Pathology Laboratories, Laboratory Services, Communicable Disease Center, Atlanta, Ga.
STAFF:	F. William Sunderman, M.D., Ph.D., and associates Guest lecturers, consultants, and staff members of the Communicable Disease Center

TYPE OF TRAINING:

The training consists of lectures and laboratory work in methodology of the detection of a number of poisons. The course is limited to 5 students.

OUTLINE OF COURSE:

Mercury determinations

Methyl alcohol determinations

Aniline determinations

Barbiturate determinations

Phenol determinations

Chloroform determinations

Lead determinations

ELIGIBILITY:

This course is designed for individuals of postdoctorate level.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis " on page 19.

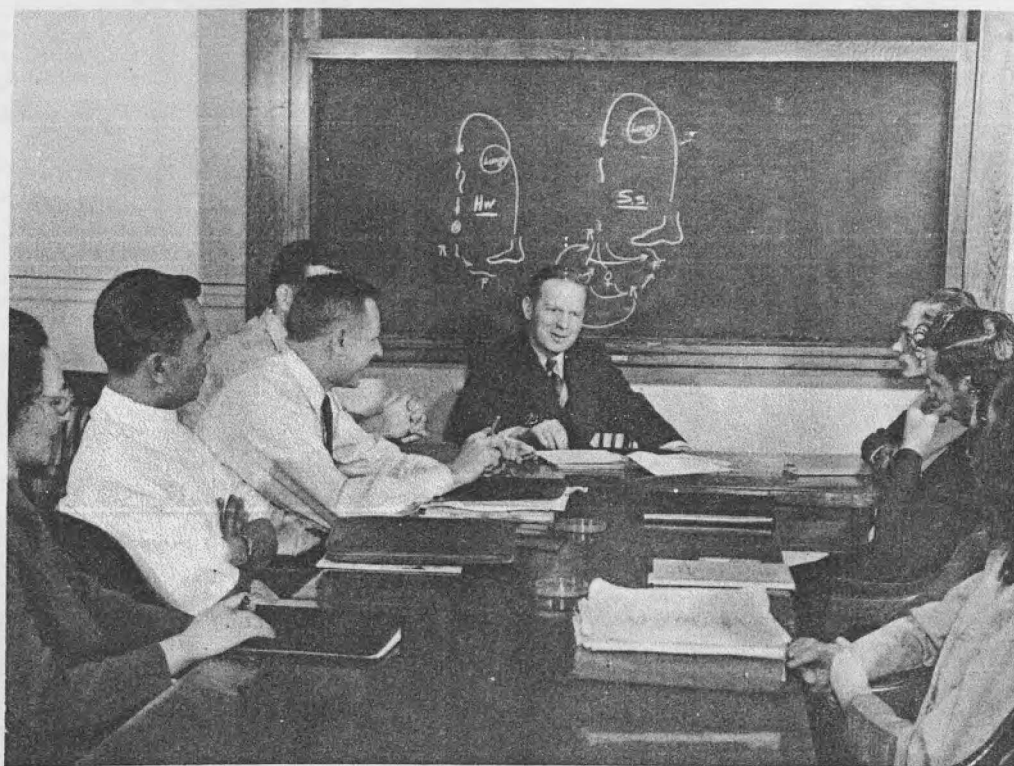
LABORATORY DIAGNOSIS OF PARASITIC DISEASES (9.33-8)

FOR LABORATORY DIRECTORS, SENIOR LABORATORY STAFF MEMBERS,
PHYSICIANS, AND OTHERS OF COMPARABLE PROFESSIONAL STANDING

DATES: May 21-25, 1951
October 22-26, 1951

LOCATION: Parasitology Laboratories, Laboratory Services, Communicable Disease Center,
Chamblee, Ga.

STAFF: Marion M. Brooke, Sc.D.
Alan W. Donaldson, Sc.D.
Harry D. Pratt, Ph.D.
Morris Goldman, M.S.
Paul L. Guptill, M.A.
Lois Norman, A.B.
Guest lecturers, consultants, and staff members of the Communicable Disease
Center



Round-table discussion on interpretation of diagnostic procedures.

TYPE OF TRAINING:

A course similar to the courses in Laboratory Diagnosis of Parasitic Diseases, Parts 1 and 2, but concentrated and particularly adapted for laboratory directors, senior laboratory staff members, physicians, and others of comparable professional standing. The primary purpose is to familiarize the students with the available diagnostic techniques and thus enable them to evaluate better the laboratory results. Only individuals indicated above should apply for this course. Laboratory personnel actually performing examinations or determining final identification should apply for the longer technical courses in which development of proficiency is possible. This class is limited to 22 students.

OUTLINE OF COURSE:

Discussion of Parasitic Diseases of Major Importance
Demonstration of Procedures and Diagnostic Stages of Organisms
Evaluation of Available Parasitological Techniques

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19..

LABORATORY DIAGNOSIS OF BACTERIAL DISEASES

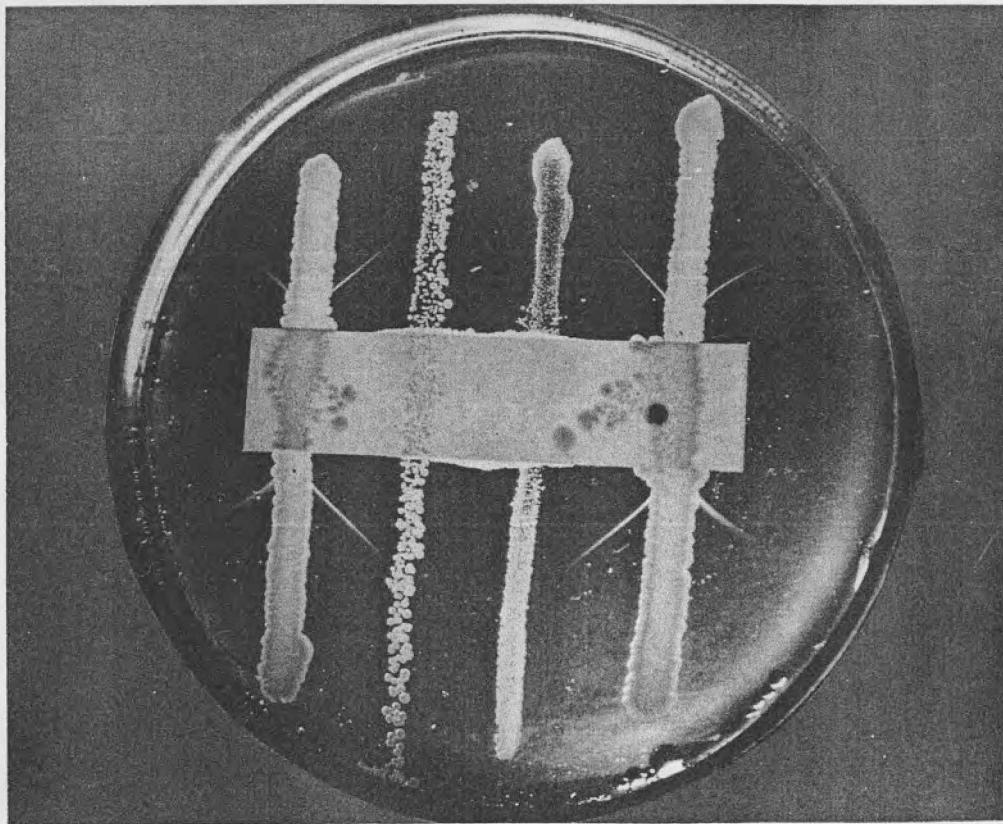
(9.34-8)

FOR LABORATORY DIRECTORS, SENIOR LABORATORY STAFF MEMBERS,
PHYSICIANS, AND OTHERS OF COMPARABLE PROFESSIONAL STANDING

DATES: May 21-25, 1951
October 22-26, 1951

LOCATION: Bacteriology Laboratories, Laboratory Services, Communicable Disease Center,
Chamblee, Ga.

STAFF: Martin Frobisher, Jr., Sc.D.
Philip R. Edwards, Ph.D.
William H. Ewing, Ph.D.
Elizabeth I. Parsons, Sc.D.
Joseph H. Schubert, Ph.D.
Elaine L. Updyke, Sc.D.
Martha K. Ward, Sc.D.
Guest lecturers, consultants, and staff members of the Communicable Disease
Center



The *in vitro* test for virulence of *Corynebacterium diphtheriae*.

TYPE OF TRAINING:

The course is similar in content to the courses in Laboratory Diagnosis of Bacterial Diseases, Parts 1 and 2, Laboratory Diagnosis of Enteric Diseases, Parts 1 and 2, but concentrated and particularly adapted for laboratory directors, senior laboratory staff members, physicians, and others of comparable professional standing. The primary purpose is to familiarize the students with the available diagnostic techniques and thus enable them to evaluate better the laboratory results. Only individuals indicated above should apply for this course. Laboratory personnel actually performing examinations should apply for the longer technical courses in which development of proficiency is possible. This class is limited to 22 students.

OUTLINE OF COURSE:

Streptococcal and related infections

The spirochetoses (except treponemal infections)

Diphtheria

The enteric infections

Organization and administration of the public health laboratory

Food poisoning

Neisserian infections

Brucellosis

The *Hemophilus* group

Tribe Mimeae

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

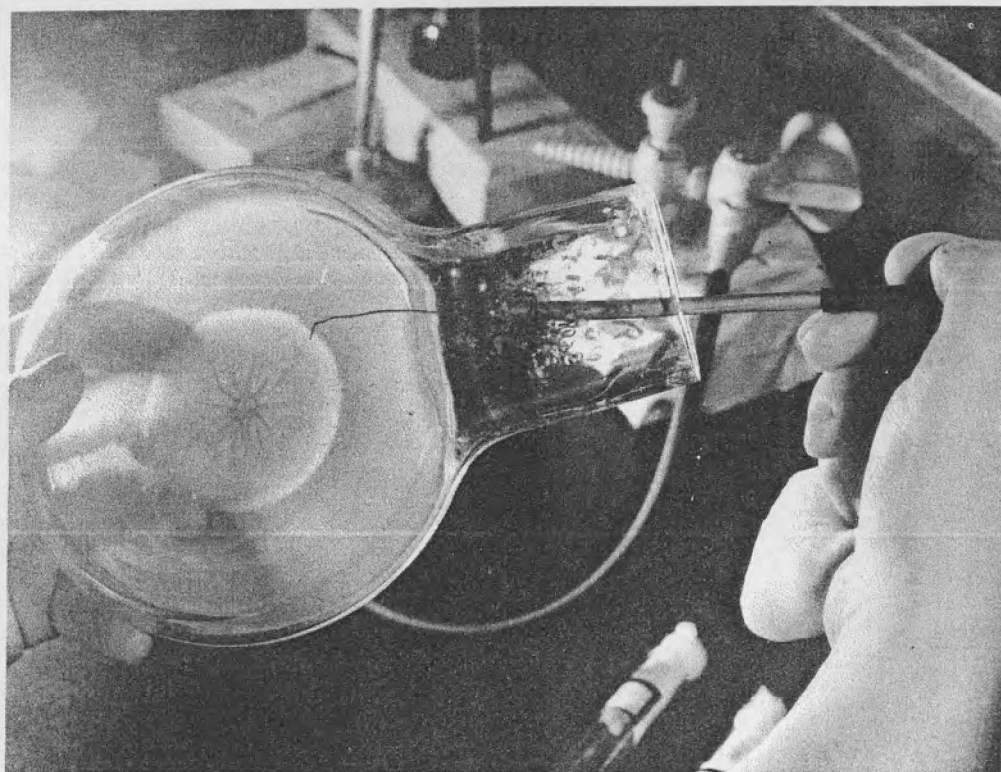
LABORATORY DIAGNOSIS OF MYCOTIC DISEASES (9.35-8)

FOR LABORATORY DIRECTORS, SENIOR LABORATORY STAFF MEMBERS,
PHYSICIANS, AND OTHERS OF COMPARABLE PROFESSIONAL STANDING

DATES: May 14-18, 1951
October 29 to November 2, 1951

LOCATION: Parasitology and Mycology Laboratories, Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Libero Ajello, Ph.D.
Lucille K. Georg, Ph.D.
Morris A. Gordon, Ph.D.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Examination of a giant colony of a fungus in the diagnosis of mycotic infection.

TYPE OF TRAINING:

The course is similar in content to the courses in Laboratory Diagnosis of Mycotic Diseases, Parts 1 and 2, but concentrated and particularly adapted for laboratory directors, senior laboratory staff members, physicians, and others of comparable professional standing. The primary purpose is to develop among these individuals a greater appreciation of the need for medical mycologic service in their institutions and to acquaint them with the latest developments in this rapidly expanding field of medicine. Only individuals indicated above should apply for this course. Laboratory personnel actually performing examinations should apply for the longer technical course in which development of proficiency is possible. This class is limited to 22 students.

OUTLINE OF COURSE:

Techniques used in the study of pathogenic fungi (diagnostic procedures, culture media, etc.)

Identification and culturing of the dermatophytes: *Trichophyton*, *Microsporum*, *Epidermophyton*

Identification and culturing of the subcutaneous fungi: *Phialophora*, *Sporotrichum*, etc.

Identification and culturing of the systemic fungi: *Coccidioides*, *Histoplasma*, *Blastomyces*, etc.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

LABORATORY DIAGNOSIS OF TUBERCULOSIS (9.36-8)

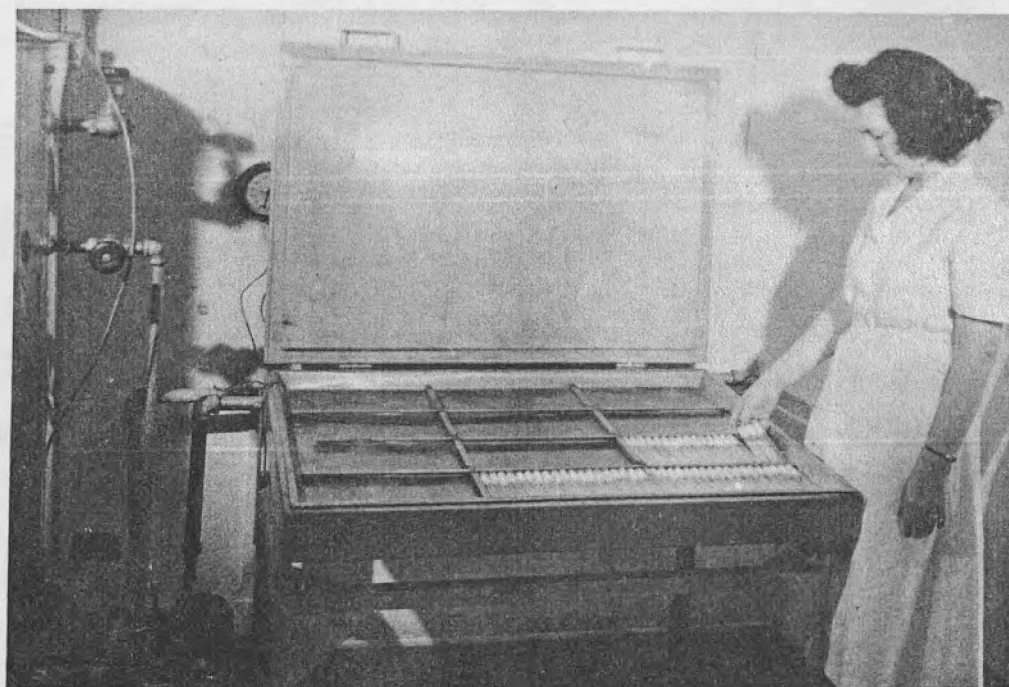
FOR LABORATORY DIRECTORS, SENIOR LABORATORY STAFF MEMBERS,
PHYSICIANS, AND OTHERS OF COMPARABLE PROFESSIONAL STANDING

OFFERED IN COOPERATION WITH THE DIVISION OF TUBERCULOSIS,
BUREAU OF STATE SERVICES, U. S. PUBLIC HEALTH SERVICE

DATES: May 14-18, 1951
October 29 to November 2, 1951

LOCATION: Bacteriology Laboratories, Laboratory Services, Communicable Disease Center,
Chamblee, Ga.

STAFF: Robert A. Patnode, M.S.
George C. Klein, B.A.
Jerrydean H. Robinson, B.S.
Conradine Riddle, B.A.
Joseph H. Kite, B.A.
F. J. Wilson, B.S.
Guest lecturers, consultants, and staff members of the Communicable Disease
Center



A uniform-temperature inspissator for coagulation of egg media for cultivation of tubercle bacilli.

TYPE OF TRAINING:

The course is similar in content to the 2-week courses, Laboratory Diagnosis of Tuberculosis, but concentrated and particularly adapted for laboratory directors, senior laboratory staff members, physicians, and others of comparable professional standing. The primary purpose is to familiarize the students with the available diagnostic techniques and thus enable them to evaluate better the laboratory results. Only individuals indicated above should apply for this course. Laboratory personnel actually performing examinations should apply for the longer technical courses in which development of proficiency is possible.

OUTLINE OF COURSE:

Microscopic techniques and interpretation of findings

Preparation of culture media

Cultural techniques

Culture diagnosis

Diagnostic use of animals

Pathogenesis of tuberculosis

BCG

Sensitivity testing

Clinical tuberculosis, current therapy

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

LABORATORY DIAGNOSIS OF VIRUS DISEASES (9.37-9)

FOR LABORATORY DIRECTORS, SENIOR LABORATORY STAFF MEMBERS,
PHYSICIANS, AND OTHERS OF COMPARABLE PROFESSIONAL STANDING

DATES: May 21-25, 1951
October 8-12, 1951

LOCATION: Virus and Rickettsia Laboratories, Laboratory Services, Communicable Disease Center, Montgomery, Ala.

STAFF: Morris Schaeffer, M.D., Ph.D.
Thomas P. Hughes, M.P.H., Ph.D.
Earl H. Arnold, C.E., M.S.
Robert E. Kissling, D.V.M.
Roy W. Chamberlain, Sc.D.
Matthew A. Bucca, Ph.D.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Inoculation of suckling mice for isolation of Cocksackie virus.

TYPE OF TRAINING:

This course is designed to describe, by demonstrations and discussions, the general techniques and methods employed in the isolation and identification of viruses responsible for diseases of man. Only a few of the simpler procedures actually are carried out by the students themselves. The remainder are demonstrated by the staff.

It is not intended nor expected that this course will make virologists of those who complete it. Rather, it is hoped that familiarity with the techniques and problems involved in virus work will enable the students to give more intelligent assistance and advice in the proper collection, preservation, and shipment of specimens to virus diagnostic laboratories, and in interpretation of the results obtained from them. This class is limited to 12 students.

OUTLINE OF COURSE:

This course consists of 10 lectures, 5 laboratory periods, and 5 seminars. The following subjects are considered:

1. The general characteristics of viruses and viral diseases
2. The selection of suitable specimens, their collection, preservation, and shipment
3. The selection of suitable animals for inoculation; the materials and routes of inoculation
4. The clinical picture in man and experimental animals; virus passage and maintenance techniques
5. Cellular changes in some viral diseases; formation of inclusion bodies
6. Immunologic procedures employed in diagnostic techniques
7. Epidemiology of viral diseases, including arthropod vectors

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

LABORATORY DIAGNOSIS OF VENEREAL DISEASES (9.38-8)

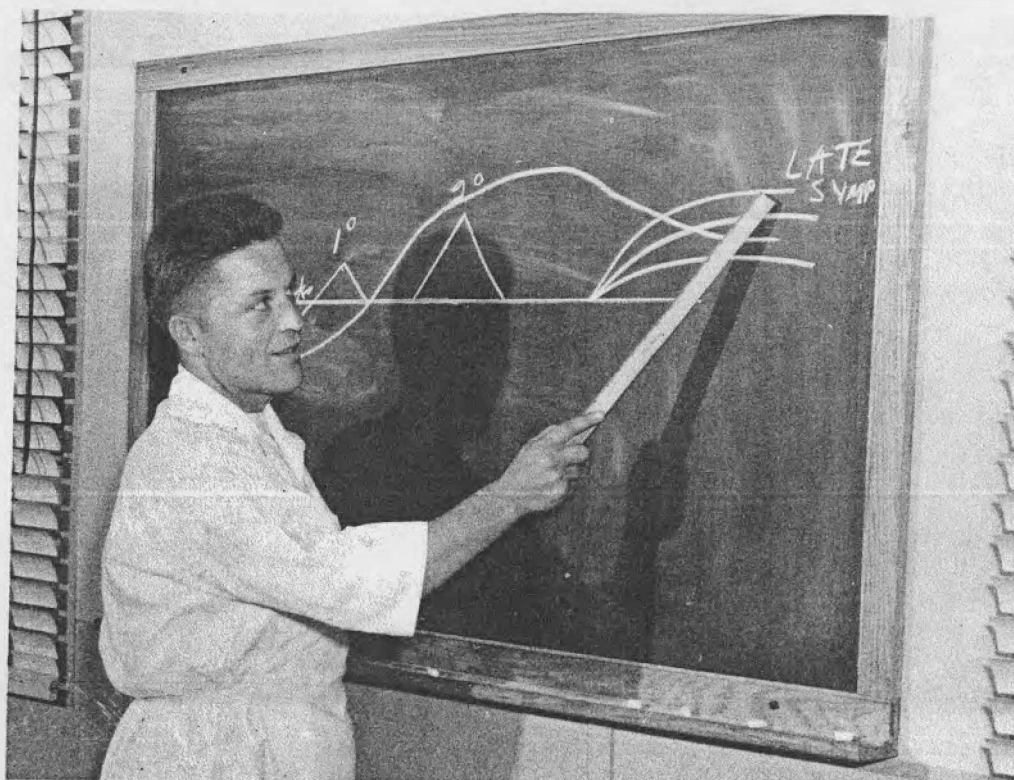
FOR LABORATORY DIRECTORS, SENIOR LABORATORY STAFF MEMBERS,
PHYSICIANS, AND OTHERS OF COMPARABLE PROFESSIONAL STANDING

OFFERED IN COOPERATION WITH THE DIVISION OF VENEREAL DISEASE,
BUREAU OF STATE SERVICES, U. S. PUBLIC HEALTH SERVICE

DATES: May 7-11, 1951

LOCATION: Venereal Disease Research Laboratory, Buildings No. 23 and No. 24, Communicable Disease Center, Chamblee, Ga.

STAFF: Sidney Olansky, M.D., Director, Venereal Disease Research Laboratory
J. H. Hill, Sc.D., Chief, Bacteriology Section
Ad Harris, Chief, Serology Section
Hilfred N. Bossak, B.S.
Arthur A. Rosenberg, M.S.
Guest lecturers, consultants, and staff members of the Venereal Disease Division



Lecture on application of serologic findings to diagnosis and prognosis of syphilis.

Environmental Sanitation Field Training for Graduate Sanitaricians (contd.)

B. ENTRANCE REQUIREMENTS

This course is offered to graduate sanitarians of the University of Massachusetts.

C. APPLICATIONS

Applications should be made through the sponsoring agency and should be addressed to the New England Field Training Center, Marshall Hall, University of Massachusetts, Amherst, Mass.; to the Training Division, Communicable Disease Center, U. S. Public Health Service, 605 Volunteer Bldg., Atlanta, Ga.; or to the appropriate Public Health Service Regional Office.

The name, education, and experience of each person applying should be included in the letter. Health department personnel should make application through the State health officer, and personnel of other organizations should apply through the organization concerned.

Due to the physical limitations of space and staff, the field training center must make final decisions regarding acceptance of trainees.

TYPE OF TRAINING:

The course is designed to acquaint the laboratory directors, senior laboratory staff members, physicians, and others of comparable professional standing, with the latest accepted procedures and recommended methods in the laboratory diagnosis of venereal diseases. This class is limited to 6 students.

OUTLINE OF COURSE:

First Day	Recommended procedures for the serodiagnosis of syphilis in the larger testing laboratories. The value of "Quantitation" and "Battery" testing
Second Day	Laboratory diagnosis of gonorrhea and the minor venereal diseases
Third Day	Present status of newer serodiagnostic tests for syphilis Research in the laboratory diagnosis of venereal diseases
Fourth Day	The "Survey Laboratory" The value of quantitative and screening procedures The yearly National Serological Evaluation Study
Fifth Day	Report forms and records Round-table discussion

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

TREPONEMA PALLIDUM IMMOBILIZATION (9.39-8)

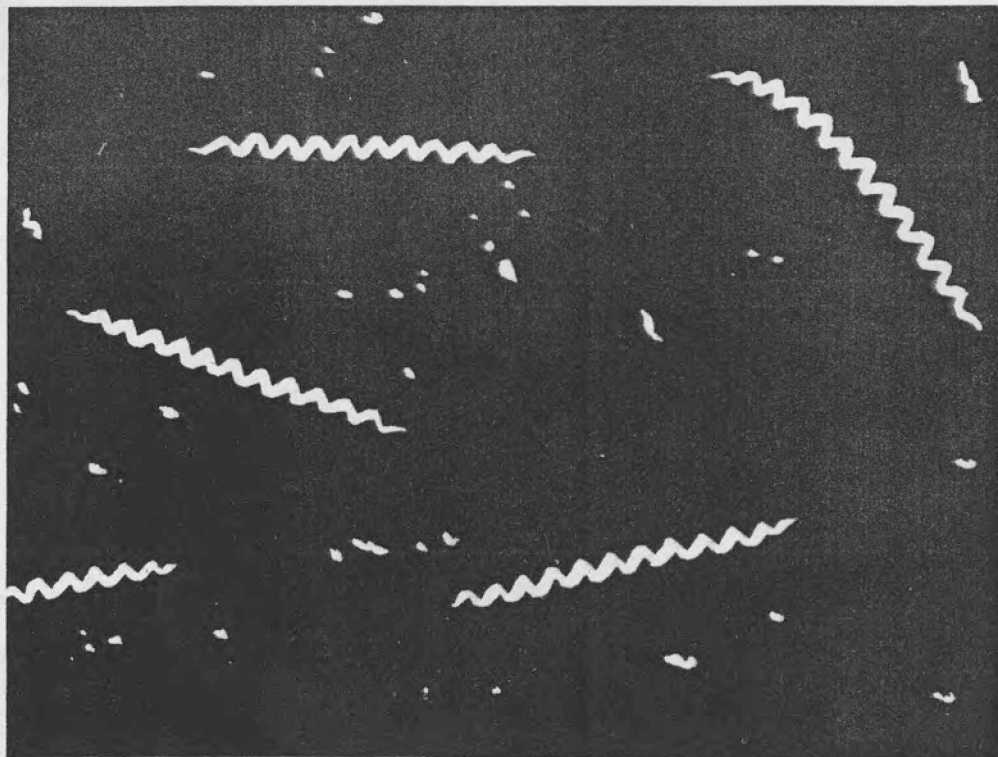
FOR LABORATORY DIRECTORS, SENIOR LABORATORY STAFF MEMBERS,
PHYSICIANS, AND OTHERS OF COMPARABLE PROFESSIONAL STANDING

OFFERED IN COOPERATION WITH THE DIVISION OF VENEREAL DISEASE,
BUREAU OF STATE SERVICES, U. S. PUBLIC HEALTH SERVICE

DATES: May 14-18, 1951

LOCATION: Venereal Disease Research Laboratory, Buildings No. 23 and No. 24, Communicable Disease Center, Chamblee, Ga.

STAFF: Sidney Olansky, M.D., Director, Venereal Disease Research Laboratory
J. H. Hill, Sc.D., Chief, Bacteriology Section
Guest lecturers, consultants, and staff members of the Venereal Disease Division



Treponema pallidum

TYPE OF TRAINING:

The course is designed to acquaint advanced laboratory personnel with the background, techniques, difficulties, and results of the *Treponema pallidum* Immobilization Test. It provides the information essential for determination of the applicability of the test in other laboratories. The course includes lectures, demonstrations, practice of the techniques, daily analysis of the results, informal discussions, and a final seminar. This class is limited to 6 students.

OUTLINE OF COURSE:

1. Background information and orientation
2. Discussion of present technique
3. Performance of test
4. Final discussion seminar

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.

MICROBIOLOGY FOR PUBLIC HEALTH NURSES (9.60-8)

OFFERED IN COOPERATION WITH THE EPIDEMIOLOGY SERVICES, COMMUNICABLE DISEASE CENTER

DATES: Feb. 26 to Mar. 2, 1951
Aug. 27-31, 1951

LOCATION: Laboratory Services, Communicable Disease Center, Chamblee, Ga.

STAFF: Martin Frobisher, Jr., Sc.D.
Marion M. Brooke, Sc.D.
Morris Schaeffer, M.D., Ph.D.
Philip R. Edwards, Ph.D.
Alan W. Donaldson, Sc.D.
Joseph H. Schubert, Ph.D.
William H. Ewing, Ph.D.
Libero Ajello, Ph.D.
Elizabeth I. Parsons, Sc.D.
Elaine L. Updyke, Sc.D.
Martha K. Ward, Sc.D.
Robert A. Patnode, M.S.
Lucille M. Sommermeyer, R.N., M.Ed.
Guest lecturers, consultants, and staff members of the Communicable Disease Center



Method of taking blood for culture.

TYPE OF TRAINING:

The nurse is a crucial agent in the very important procedure of specimen collecting and should learn to act on an intelligent and informed basis rather than by rule-of-thumb methods. The aim of this course is to present to the practicing nurse a rationalization of specimen collecting.

The approach is made along five different lines. A. Basic reasons for collecting each type of specimen; B. Proper facilities and equipment for collection; C. Steps in actual collection of specimens; D. Disposition of specimens after collection; E. Action of the nurse on the basis of her evaluation of reports.

OUTLINE OF COURSE:

The program of teaching is arranged as follows:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Fungi	Parasites	Viruses	Bacteria	Bacteria
a) Cutaneous	a) Blood	a) Blood	a) Enteric	a) Sputum
b) Subcutaneous	b) Enteric	b) Enteric	b) Throat and	b) Blood
c) Systemic		c) Respiratory	other body	1) cultures
		d) Others	openings	2) serum
				c) Others

The teaching material consists of lectures, demonstrations, and audio-visual aids.

ELIGIBILITY:

This course is intended primarily for nurses. When facilities permit, other qualified persons will be accepted, especially individuals who may be responsible for directing the work of public health nurses.

OTHER INFORMATION:

Refer to "General Information for the Group of Courses in Laboratory Diagnosis" on page 19.