The plan for the course of instruction in psychiatry was based on suggestions contained in Medical Department Circular No. 22, Office of the Surgeon General, Washington, D. C., dated August 1, 1917.^c However, the instruction given was not confined to those suggestions, and full advantage was taken of the very large and varied amount of clinical material available.¹⁴

As an illustration of the manner of execution of the plan of instruction the course given at the psychopathic hospital, Ann Arbor, Mich., is reproduced here in full:

The Course in Neuropsychiatry for Medical Officers of the Army, Conducted at the Psychopathic Hospital of the University of Michigan

Soon after the organization of the War Work Committee of the National Committee for Mental Hygiene, plans were perfected for the instruction of medical officers assigned to neuropsychiatric service in the Army. It was planned that this instruction should be given at various neurological and psychiatric hospitals which were adequately equipped for carrying this through.

In accordance with this plan such a course was organized at the psychopathic hospital of the University of Michigan in the latter part of July, 1917.

As the period of assignment of officers for instruction would necessarily be brief, it was essential that the instruction should be as intensive as possible and also be broad enough in scope to meet the practical needs of a neuropsychiatric medical service. To this end instruction was provided in those medical subjects that might form a background for neuropsychiatric training and would have a practical application in neuropsychiatric diagnosis and treatment.

The instruction was arranged to follow out a definite weekly schedule which was planned to furnish a well rounded out course to be completed in six weeks.

As officers were continually coming and going, owing to exigencies of the Army requirements, it was found impossible for each man to follow a prescribed schedule closely. Some were in attendance for only two weeks, while others remained longer than the six weeks' period. Repetitions of the course made it possible to meet these irregularities.

By the time the course was organized it was known from the medical experiences of the war what special training was needed, and the course was shaped to meet these requirements. The following schedule shows the arrangement of the instruction:

	9-10	10-11	11-12	1.30-2	2-3	3-4	4-5	5-6
Monday		Doctor Camp Clinical neurology		Doctor Barrett Psychiatric clinic				
Tuesday		Doctor Barrett Psychiatric conference		Clinical psychiatry Hospital staff confer- ence		Doctor Barrett and Doctor Gurd Neuralpathology		
Wednesday		Doctor Sloeum Neurological disorders of the eye		Docto	Barrett and Doctor or Gurd Neurologic		Octor Camp rological clir	nic
Thursday	Doctor Jones Psychometric tests			Doctor Barrett Psychiatric conference		Doctor Barrett and Doctor Gurd Neuralpathology		
Friday			octor Camp cal neurology		Doctor Barrett Psychiatric conference		Doctor Barrett and Doctor Gurd Neuralpathology	
Saturday	Doctor Furstenberg Neurological disorders of the ear							

[·] This circular is quoted in full in Chap. IV.

The detailed instruction as given in the various divisions of the course was as follows:

PSYCHIATRY

Psychiatric instruction was given at the psychopathic hospital by Doctor Barrett and the medical staff of the hospital, Dr. Earl Palmer, Dr. B. L. Jones, Dr. Raymond F. Wafer, and Dr. James Stanton. The following subjects were covered:

- General survey of the problems of mental disorders in their military relations. Two hours.
- 2. Discussion of the organization for neuropsychiatric work; of the schemes and methods for diagnosis and recording of data. Two hours.
- 3. General psychopathology. Didactic lectures, with clinical demonstrations. Ten
- 4. The functional mental disorders of the present war. Survey of the experiences published in the German, French, and British literature. Four hours.
 - 5. Shell shock and the psychoneuroses. Two hours.
- 6. Psychoneuroses; neurasthenia; anxiety neuroses; hysteria; compulsion neuroses. Didactic lecture and clinical demonstrations. Four hours.
- Manie-depressive insanity. Didactic lecture and clinical demonstrations. Two hours.
 - 8. Dementia pracox. Didactic lecture and clinical demonstrations. Four hours.
- Syphilitic mental disorders. Didactic lecture, clinical and anatomical demonstrations. Four hours.
- Epileptic mental disorders. Didactic lecture and clinical demonstrations. Two hours.
- Psychopathic personalities. Didactic lecture and clinical demonstrations. Four hours.
 - 12. States of mental defectiveness. Two hours.
- 13. Feeble-mindedness and mental subnormalities. Didactic lecture and clinical and anatomical demonstrations. Two hours.
- 14. Psychometric tests. Didactic lecture and practical work in making examinations of defectives and delinquents. Six hours.
- 15. Mental disorders of organic brain diseases. Arterio-sclerotic mental disorders; mental disorders with tumors of the brain and brain injury. Didactic lecture and clinical demonstrations. Two hours.
- 16. Serological diagnostic demonstrations. Technique and interpretation. Two hours.
- 17. Attendance at the psychiatric clinic in the medical school at the university. One and one-half hours each week.
- 18. Practical work in study of cases and preparation of histories on the wards of the hospital.

NEURALPATHOLOGY

A systematic course in the pathological anatomy of mental and nervous disorders was given by Doctor Barrett and Dr. Adeline Gurd, pathologist at the psychopathic hospital. This course covered 14 periods of two hours each. The schedule followed in this course was as follows:

- 1. Embryological development of the central nervous system. Surface topography of the brain.
 - 2. Study of gross fiber arrangements, and ganglia of brain.
 - 3. Histology of the nerve cell, nerve fiber, neuroglia and cortical architecture.
 - 4. Histoloy of the spinal cord.
 - 5. Neuronic arrangements of the nervous system. Fiber paths.
- 6. Localization of nervous function. Correlation of structure and function. Diaschisis. Theoretical consideration of aphasia and apraxia.
- 7. General pathology of the nervous system. Malformations. Discases of the membranes of the nervous system. Pathological changes in nerve cells. Pathological changes in nerve fibers. Secondary degeneration.

- 8. Inflammation, repair, and reactive processes in the nervous system.
- 9. Syphilis of the nervous system. Gummatous formations. Meningitis. Vascular lesions. Histological process of general paralysis.
- 10. Circulatory disorders of the nervous system. Arteriosclerosis. Haemorrhagic softening.
 - 11. Tumors of the nervous system.
- 12. Pathology of the spinal cord. Myelitis. Poliomyelitis. Progressive muscular atrophy. Amyotrophic lateral sclerosis.
 - 13. Tabes. Friedreich's ataxia.
- 14. Pernicious anemia. Multiple sclerosis. Syringomyelia. Hydromyelia. Peripheral neuritis.

NEUROLOGY

The instruction in neurology was given by Dr. Carl D. Camp, associate professor of nervous diseases in the University of Michigan Medical School, in the neurologic wards of the general hospital.

The course in neurology was divided into three parts:

- A. A lecture course designed to cover the subjects systematically.
- B. Clinical demonstrations in which the officer was assigned to a case and allowed one hour to examine, his examination and conclusion being criticized by the instructor before the whole section, and free discussion was encouraged.
- C. A series of formal clinics in neurology, the same as given to the senior medical students in the University of Michigan, with special emphasis on the military aspects of the cases under discussion.

OPHTHALMOLOGY

Instruction in this subject was given by Dr. George Slocum, instructor of ophthalmology in the Medical School of the University of Michigan. The subjects covered were as follows:

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- 1. A review of the anatomy of the eye as an optical instrument.
- 2. Physiology of the accommodation and physiologic optics.
- 3. Anatomy and nerve supply and physiology of the eye muscles, with binocular vision and fusion, and including the deep origin, relation, and course of the third, fourth, and sixth nerves.
- 4. Museular anomalies such as manifest and latent spastic strabismus, including heterophoria.
 - 5. Diplopia and extraocular paralysis and nystagmus.
- 6. Nerve supply and physiology of the pupillary reflexes including miosis, mydriasis, hippus, and Argyle-Robertson pupil.
- 7. Anatomy and physiology of the retina, optic nerve, chiasm, primary visual ganglia, optic tracts and cortical visual centers.
 - 8. Mechanism of production of choked disc and significance.

The foregoing subjects were taught with the aid of drawings, specimens, and anatomical models.

В

- 1. Diagnosis of optic neuroses and malingering.
- 2. The eye manifestations of wounds of the motor and sensory nerve of the eye and of the optic nerve, tracts, radiations, and centers.
 - 3. Visual fields and hemiopia.
 - 4. Eye symptoms produced by intracranial lesions with particular reference to trauma.
- 5. Eye symptoms of brain tumor, meningitis, multiple selerosis, myelitis, locomotor ataxia, superior polioencephalitis, general paralysis, exophthalmic goiter, including the various signs associated with exophthalmic goiter, chorea, migraine, and herpes zoster of the eye.

OPHTHALMOSCOPY

1. Direct and indirect methods, including examination of the ocular media with the ophthalmoscope.

2. Ophthalmoscopic appearance of the fundus and the diagnosis of syphilitic, albuminuric, diabetic, leukemic lesions of the fundus and other lesions of the fundus dependent upon general diseases.

3. Differential diagnosis of ocular lesions of the choroid, retina, and the optic nerve with especial reference to their differentiation from those lesions associated with general diseases.

4. Ophthalmoscopic appearance and diagnosis of glaucoma.

Throughout the whole course from one-third to one-half of the time was devoted to the study of cases with the ophthalmoscope with demonstration of the ophthalmic changes peculiar to ocular and general diseases, with especial reference to their practical differentiation.

OTOLOGY

A course of lectures and demonstrations of disorders of the ear in their neurological relations was given by Dr. Carl Furstenberg, instructor of otolaryngology in the medical school. These were given once each week for two hours. The subjects covered were:

- 1. Functional examination of the internal ear. Disorders of the cochlear portion of the eighth nerve. Vestibular nystagmus.
 - 2. Tests for detecting simulation of deafness.
- 3. Diseases of the internal ear. Ménière's disease. Arteriosclerosis of the internal ear. Injuries to the internal ear. Syphilis of the internal ear. Hysterical deafness. Occupational deafness.

SEROLOGY

This course was given by Dr. Sobei Ide, serologist to the hospital, and included:

- 1. Technique of lumbar puncture.
- 2. Clinical diagnosis of the pathology of the cerebrospinal fluid, Wassermann and gold solution tests.

There were assigned to the Ann Arbor course 78 medical officers. In general it seemed that the plan followed worked out quite satisfactorily. The chief difficulty encountered was the marked difference in knowledge and neuropsychiatric experience for such special training in those assigned to the course. While a considerable number had been actively engaged at some previous time in neuropsychiatric practice, others had no more qualifications for this special training than those of the general practitioner. There was, however, an earnest interest shown by all in attendance and the comments made later by those who had been in active service definitely showed that the plan followed was of great value.

The student officers ordered to the neuropsychiatric schools were on duty status. Between two and three hundred were given this opportunity of acquiring or perfecting neuropsychiatric knowledge.¹⁴

ENLISTED PERSONNEL

The enlisted personnel for the care of nervous and mental cases were made up, as stated, as far as possible from attendants who had had experience in State hospitals. They were assigned to the division of neurology and psychiatry, in some cases by orders, when already enlisted, and in others, by induction into the service, and were sent first, as far as possible, to a training camp.

The shortage of enlisted men experienced in the ward care of mental cases, due in part to the exigencies of the selective service draft, which diverted many such men to other branches of the service, and also to the pressing need for attendants in civilian hospitals for the insane, produced a situation which could