

ALDEN (C. H.)

THE SPECIAL TRAINING OF THE MEDICAL OFFICER,

WITH BRIEF NOTES ON

ARMY MEDICAL SCHOOLS ABROAD  
AND AT HOME.

[An Address delivered before the Association of Military Surgeons of the United States at Washington, D. C., May 3, 1894.]

BY DR. CHARLES H. ALDEN,

Assistant Surgeon General U. S. Army, Washington, D. C.





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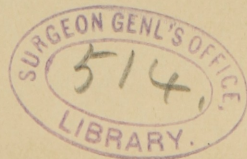
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Assistant Surgeon General U. S. Army, Washington, D. C.

The great interest taken by the medical profession of the United States, and especially by the medical officers of the National Guard, in the establishment and work of the Army Medical School in this city, suggests the belief that at this gathering of Military Surgeons from all parts of the country it will be both appropriate and desirable that some account of this school should be given, stating its organization, plans and the work it is doing. The many expressions of interest and approval received from distinguished medical teachers and practitioners must have been very gratifying to the Surgeon General, at whose instance the school was founded. They have certainly been a source of encouragement to the faculty and have been gratefully appreciated. It is not intended to treat the subject exhaustively, for the time that can be allotted to any one paper is short.

It is unnecessary, of course, to point out to this body the need for such a school. We are all proud of the high rank the medical schools of America have taken, of the great improvement that has been made in the courses of study, the extended time now required and the excellent laboratory and clinical advantages now provided; but these schools can not supply the special training the Army Surgeon needs for his work. They have neither time nor facilities for such instruction. The very existence of this society and this gathering together of its members to study subjects pertaining to medico military affairs proves that special study is necessary. Unfortunately the idea seems to linger in the minds of a few people that all the military surgeon has to do is to sit in his quarters and



wait until somebody gets sick or hurt, that as none but sound men are enlisted there can not be much need for his services, or even that in case of a march or a fight it is only necessary to engage the nearest civilian physician and take him along.

It needs, however, but a little reflection on the part of intelligent men to see that the medical officer has demands upon him other than those of the practitioner settled in a civil community.

He has, in the first place, to make sure by a careful examination that none but sound men are enlisted or commissioned. Then it becomes his duty (and this, though briefly stated, is really his most important work), to watch over the health of the troops and see that no cause interfering with their physical efficiency gains headway. This involves a study of Hygiene in all its various branches, of air and water and their impurities, clothing, food, exercise, barrack and hospital construction, sewerage and drainage, sanitary chemistry and practical bacteriology. He must be acquainted with the diseases specially apt to attack troops or caused by the aggregation of men, and the wounds caused by the weapons used in modern warfare. He must know how to manage a hospital, to command, instruct and discipline his assistants and his Hospital Corps and lastly, but by no means least, he must have an intimate acquaintance with the methods of army business, of regulations, modes of supply, etc., so that he can readily and effectively apply his professional and special knowledge to the varied work committed to him. It is this special training that the young medical officer gets in the Army Medical School.

It is interesting to see how the necessity for an Army Medical School has been recognized for many years and by many nations, by some of those nations even that we are not disposed to look upon as the most progressive. We find that some thirteen nations have schools of instruction for their Army medical officers more or less complete, and that in several more Army Medical Schools have had an existence at different times. There is not time to more than briefly look at the principal schools; but this brief survey will be of interest.

Army Medical Schools group themselves into two general classes. First those in which the pupil or candidate is taken at the beginning of his medical studies and receives his general professional

education as well as his special training for the medical staff under the care of and partly or entirely at the expense of the State. He obtains his civil degrees as Doctor of Medicine during the course which necessarily is an extended one, lasting a number of years. The Army Medical Schools of France, Germany, Russia, Turkey and Mexico are illustrations of this system. All other medical schools, by far the larger number, are practically post-graduate schools; in these the candidates under probation or newly appointed medical officers are already graduates of civil medical colleges and are given instruction in military medicine, surgery and hygiene and in their special duties as medical officers, together with in most cases practical work in military hospitals. The British Medical School is the most important instance of this class. Other less complete schools are those of Sweden, Italy, Spain, Switzerland, Greece, Japan and the United States.

The British Army Medical School is of the most importance for us to study, since the organization and mode of recruiting of its army is most like ours. The necessity of special instruction for Army Surgeons was early recognized in Great Britain and chairs of military surgery were established in the last century in the universities of Edinburgh and Dublin. John Bell, Sir George Ballingall and Dr. Robert Jackson advocated the establishment of an Army Medical School, but it was not until after the need was driven home to the Government by the administrative breakdown of the Crimean war that the school was established. Organized in 1860 at Chatham, it was, in 1863, removed to the Royal Victoria Hospital, Netley. For several years medical officers of the Navy were also instructed at Netley, but for the past few years the Navy has had its own school at Haslar. There are four professors with assistants, giving instructions in Hygiene, Military Medicine, Military Surgery and Pathology, which are taught not only by didactic lectures but by laboratory exercises. Courses on Ophthalmology and Lunacy are also given and the young medical officers are taught practically the examination of recruits and other details of Army medical work. The wards of the Victoria Hospital, which receives patients invalided from India and the Colonies, give facilities for the study of diseases and injury. Graduates in medicine admitted at a preliminary examination, held

twice yearly at London, as surgeons on probation, are sent to the Netley school for a four months' course and afterwards to the camp at Aldershott for instruction in equitation and Hospital Corps drill before being assigned to duty with troops. The rank of the young medical officer upon entering the service is determined by the combination of marks received at the preliminary examination held in London and those given at the final examination concluding the ~~three years'~~ course at Netley. This feature might with propriety be incorporated in our system. The British Medical School has a world-wide reputation from the distinguished lecturers and writers, Aitken, Parkes, Longmore, McLean and others, who have been connected with it.

The arrangements at the Army Medical School on the Continent, where the military services and general conditions are very different from ours, are more difficult to describe, and we can note only the most prominent features.

"Military Hospitals of Instruction" were instituted in France as early as 1836, but it was not until 1852 that the present Chiet Medical School at Val de Grace Hospital, Paris, was established. This institution receives its pupils from two sources, the pupils being chiefly those who have received their medical education and received their doctorate while at the preparatory Army Medical School and Hospital at Lyons. The Lyons school replaced a similar one at Strasburg after the Franco-Prussian war. Soldiers from the line are admitted to this school at Lyons as well as civilian youth. Others are admitted to Val de Grace who had obtained their medical education and degrees at their own expense and who have entered the Army direct from civil life after competitive examination. Provision is also made for the instruction of medical officers already in service as they can be spared from their regular duties, especially after return from service in the Colonies. The administration of the school is under the general charge of a Director, and the teaching staff consists of six professors and eight assistants. The branches taught are very similar to those taken up at the Netley School—Military Hygiene, Military Medicine and Surgery, didactic and clinical, Diseases of the Eye and Ear, and Skin Diseases; these are taught chiefly clinically. There are also courses in Sanitary Chemistry, Bacteriology, Histolog-

ical and Pathological Anatomy, Medical and Military Service and Administration; Ambulance Drill and exercises in riding and fencing are also subjects of instruction.

The Military Medical School of the German Empire, training medical officers for both Army and Navy, is in Berlin. Founded at the instance of Surgeon General Goercke in 1795, after some modifications of organization and name, it became, in 1818, the Medicinisch-Chirurgisches Friedrich-Wilhelms Institute. The Medicinisch-Chirurgische Academie fuer Militaer, founded in 1811, differs only in the pay and allowances for quarters for students and the length of time the students have to serve as medical officers after graduation. The instruction and clinics are the same, being given chiefly by the professors of the University of Berlin staff. There are twenty-six Staff Surgeons on duty as instructors and assistants. The course of instruction extends over four and a half years, taking students through the whole of their medical education. The special medico-military subjects taught do not differ materially from those taught at Netley and Val de Grace—Military Medicine, Surgery and Hygiene, Microscopy, Bacteriology, and instruction in military duties, riding, etc. A peculiar feature of the German school is that every student is required to serve six months in the line, which is taken from the course of study but is not lost, as his physical development, discipline and knowledge of practical military affairs are thereby enhanced. There are now 264 students, 18 belonging to the Navy; 30 entering the school every six months, there being two sessions a year. The laboratories, museum, and libraries are fully equipped and instruction is provided not only for the pupils proper but for medical officers of the Army already in service. Clinical medicine and surgery is taught at the civil and garrison hospitals of Berlin.

The Imperial Russian Army Medical School at St. Petersburg has existed for a number of years. It has two classes of pupils, those educated at public cost and those paying their own expenses. Five years is the course, two sessions a year, and those educated at public cost must serve a year and a half as medical officers for every year at the school. Commissioned medical officers are also sent to the school for a two years' course. There are some 50 of this class of students.

Those officers who take the course must serve a proportionately longer time before they can retire from the Army. The students are quartered at the Military Hospital in St. Petersburg and the courses do not differ materially from those at the other good military medical schools.

Besides the medical schools of the greater nations, there are others in the smaller States. Sweden has had a military medical school at Stockholm since 1877. Its course in 1892 extended from September 15th to December 22d. The course, though a short one, seems to include all the important branches taught in other schools, including clinical work in the garrison hospital and laboratory exercises in chemistry and bacteriology, etc. A somewhat unusual feature of the course was the study of the history of wars, plans of campaigns and practical instruction in the field in location of dressing stations and field hospitals.

The Italian Army Medical School, called School of Application of the Sanitary Service, is situated at Florence, and seems to combine instruction for enlisted men, for candidates for the lower grade of medical officers and special courses for medical officers already in service. It has a Director and Vice-Director, six professors and several assistants. The course is seven months.

The Spanish Military Medical School, established at Madrid in 1886, bears the title "Anatomical, Bacteriological and Pathological Institute." It has a staff of a Director and three other medical officers. Medical officers appointed into the Spanish Army are attached as ward surgeons to the hospital in Madrid, receiving instruction at the same time at the military institute above referred to.

The Swiss Army is in reality a National Guard, each canton furnishing troops for a brief period, in times of peace, for military practice. The medical officers are mostly regimental. The four medical officers of the permanent establishment also form the staff of the Army Medical School at Basle. Each regimental medical officer is required to attend the school for fourteen days every two years, or, at his option, to serve with the troops during a maneuver season.

Greece gives its army medical officers admitted from civil life after competitive examination, a six months course of instruction



at the Military Hospital at Athens, with lectures on the usual special subjects treated at such schools.

The medical officers of the Turkish Army are educated by the Government from an early age, passing through primary and advanced schools before entering the medical schools proper and receiving their degree. They finish their instruction at a Military Hospital. All these schools are in or near Constantinople. The course extends over fifteen years, and the branches are similar to those taught in like schools in other countries.

Medical schools for the military service have existed in Austria and in Holland but are not just now in operation.

Coming over to America, we find that our sister Republic of Mexico has recognized the necessity for special education of her Army Medical Officers and has a hospital of instruction in the City of Mexico, with a Director and a staff of five professors and four other assistants and twelve students. The students while being trained in the Hospital take a concurrent course in medicine at the National Medical College, being commissioned after receiving their degree. Other medical officers enter the service direct from civil life.

Even Japan has its Army Medical School, and, to judge from its organization and curriculum, an excellent one. There are a president, five professors and three assistant professors; also a professor of languages, English, French and German. Military Medicine, Military Surgery and Military Hygiene, Military Laws and Regulations and Pharmacy are taught. The students, already graduates in medicine, are required to take two courses in the Army Medical School and pass a satisfactory examination before being commissioned medical officers in the Army. Japan appropriates \$5000 annually in addition to salaries for the expense of its Army Medical School.

This brief glance at the Army Medical Schools of other countries may well excite surprise that we have been so late in establishing our own, which dates from 1893.

It should be noted, however, that the Medical School of the United States Army, established in this city last year by order of the

Secretary of War at the instance of Surgeon General Sternberg, was not the first one that had been proposed in this country, though the first to be established and to go into operation. Professor J. H. Brinton, of Jefferson Medical College, formerly Surgeon of Volunteers and on duty in Washington from June, 1862, to September, 1864, informs me that early in 1863 he was ordered by Surgeon General Hammond to prepare for the opening of an Army Medical School. Surgeon Brinton, who will always be remembered as the first curator of the Army Medical Museum, which has to-day, under the superintendence of Doctor Billings, and the financial help of Congress, reached such large proportions, had his collection in the Corcoran School House on H Street, between 13th and 14th Streets, which had been taken possession of by the Government for the purpose. Under the direction of General Hammond Dr. Brinton proceeded to fit up the main room for a lecture room, and had a revolving table, anatomical and surgical charts and other appliances prepared. The scheme had even gone so far that the chairs, and the teachers to fill them, were under consideration. Among these were Surgeons Coolidge, Vollum and Lidell and Assistant Surgeons Woodward and Thomson and others. The students were to be medical cadets and the younger medical officers, of whom there was of course a considerable number in and around the city. Surgeon Brinton had, he informs me, prepared his opening address, but the plan failed at the last moment to receive the sanction of the War Department and never went into actual operation.

As stated, the U. S. Army Medical School was established in June, 1893, by order of the Secretary of War, and it began its first session of four months November 1, 1893. It is designed for post graduate instruction only, and intended chiefly for the benefit of the candidates who have passed the examination held just previous to the opening of the school session and been commissioned assistant surgeons. Assistant surgeons of longer standing and service are also admitted if stationed sufficiently near Washington to attend or who desire to devote a leave of absence to this instruction. Five newly commissioned and four assistant surgeons of older date were in attendance during the session of 1893-94. The organization and regulations of the school are given somewhat in detail in

the appendix to this paper. As seen, the faculty consists of four professors, those of Military Surgery, Military Hygiene, Military Medicine and Clinical and Sanitary Microscopy, and a President, who also lectures on the duties of the medical officer. There are two laboratory courses, Chemical and Pathological, laboratory work being made a prominent feature of the course and consuming most of the students' time. Instruction in litter and ambulance drill and first aid and in equitation is also included.

The sessions of the school are held at the Army Medical Museum, corner 7th and B Streets, S. W., convenient rooms having been assigned it in this building. These consist of a lecture room, faculty room, special library, chemical and pathological laboratories. Litter drill is taught at the Post Hospital at Washington Barracks, and riding at Fort Myer, Va., through the kindness of the commanding officer, General Guy V. Henry. The appended schedule shows the order of daily duties, from which it is apparent that the student officer's time is very fully occupied.

But some more detailed account of the subjects taught at the school will be desired.

In the department of Military Surgery the professor took up the contrast between ancient and modern conditions, and then modern weapons and missiles, the wounds they produce in different parts of the body, the treatment they demand under the peculiar conditions imposed by the exigencies of the battlefield and the march and as influenced by the germ theory; the arrangements necessary for the prompt relief of the wounded on the field and their transportation, and finally the organization of the military hospital.

The Professor of Military Hygiene, after an historical survey of his subject, took up the influences that affect the health of the soldier, treating of pure air and how to secure it, of water and its impurities and the dangers of disease therefrom, of drainage and sewage disposal, of healthy sites for and sanitary construction of barracks and hospitals, of food, clothing, and exercise, of sanitary jurisprudence and quarantine, and of vital statistics and death rates as indications of the health of a command. The valuable collections included in the Army Medical Museum and Library were described, with suggestions as to best use of latter—a most important matter.

The Department of Military Medicine treated of the diseases most apt to affect troops under the varying conditions to which they are exposed, when massed together in barracks or camp, on the march, in malarial regions or under extreme climatic conditions. The causes, symptoms and treatment, and mode of ~~promotion~~<sup>PREVENTION</sup> of the more important diseases were pointed out.

The instruction given by the lecturer on the duties of the medical officer was in a measure complementary to that in other departments, inasmuch as it gave the young medical officer such knowledge of and familiarity with official forms and methods of doing business in the Army as would enable him to apply his strictly professional knowledge to the best advantage and with the least friction with the duties and rights of others. It was intended to save him months of disagreeable breaking in to Army ways and spare him the mortification of many blunders. Military administration is, we know, a highly organized and nicely adjusted machine and special knowledge is necessary to its effective working. In this department the student officer was in the first place taught the necessity for and the requirements of military discipline and subordination as the foundation of his efficiency and success, and his relations to the commanding and other officers. He was taught both theoretically and practically how to examine recruits, how to examine into and report upon the sanitary condition of his post or camp; how to conduct sick call; how to make out certificates for discharge, especially in reference to the question of pension; how to care and account for public property; how to govern, provide for and instruct the men of the Hospital Corps detachment under his immediate command, with many other matters that need not be enumerated. The instruction given was distinctly practical and included the making out of many papers.

The Laboratory courses, from their practical character and the considerable time given to each, as we shall see, were of special prominence and importance.

The course in Sanitary Chemistry, after preliminary work necessary to familiarize the students with principles and methods, took up the detection of poisons, such as arsenic in organic mixtures, wall papers, etc.; of antimony, mercury and lead; the analysis of the fluids of the body; the chemical examination of the air and results of ven-

tilation; the study of water and its impurities and their detection; the purity of articles of food, such as milk, butter, cheese, flour, baking powder, etc., and the study of important toxic animal and vegetable products.

The instruction in the Department of Clinical and Sanitary Microscopy was entirely by laboratory demonstration and work. Here the student officer was made to become familiar with the use of the microscope in its important applications to histological, pathological and diagnostic work and the technique necessary for the study of diseased tissues and of pathogenic organisms. A systematic study of the more important bacteria followed, such as the bacilli of anthrax, of typhoid fever, of tuberculosis, of diphtheria and of the spirillum of Asiatic cholera. In each case the forms and conditions of growth of these bacteria were carefully studied with a view not only to their recognition but to an understanding of the best methods of excluding them or arresting their production. Inflammation was studied under the microscope as it actually occurs in various tissues when artificially produced; then the microscopical appearances as they occur in various diseases and in various organs.

The instructor in Hospital Corps drill gave the student officers important practical lessons in first aid to the sick and wounded in emergencies and on the battlefield, such as arrest of hemorrhage, application of splints, etc., and in the careful handling of patients in the litter and ambulance drill. The students were required not only to do these things themselves, but practiced in giving direction to the men of the Hospital Corps in the performance of this work.

The school has been favored with several short courses of lectures by gentlemen not officially connected with it, which have been of great interest and value to the class:

On Military Law, by Major G. B. Davis, Judge Advocate, U. S. Army.

On Comparative Anatomy, by Captain J. C. Merrill, Medical Department, U. S. Army.

On Medical Jurisprudence, by Dr. Robert Fletcher, F. R. C. S.

On Parasites of man, by Dr. C. W. Stiles, of the Agricultural Department.

Prof. W. W. Keen, of Jefferson College, Philadelphia, delivered a most interesting and instructive lecture before the class on "Recent Advances in the Surgery of the Head."

At the closing exercises of the school, held March 28, 1894, an admirable address on the Army Surgeon was delivered to the graduates by Professor William Osler, of Johns Hopkins University, Baltimore, Md. At these closing exercises a large assemblage of distinguished officers and civilians was present, and the Major General Commanding gave the class a few happily chosen words of advice.

This account of the course of instruction at the first session of the Army Medical School is not at all intended to imply that the course is a perfect or a settled one. It is fully believed that the experience gained will result in perfecting and extending the curriculum. Ways are already seen in which this seems practicable.

No account of Government medical instruction in this country would be complete without mention of the admirable department of instruction established at the U. S. Naval Laboratory, Brooklyn, N. Y., shortly before the establishment of the Army Medical School. Surgeon General Tryon, of the U. S. Navy, is the author of the scheme, which was put into effect by order of the Secretary of the Navy. The instruction in this institution is chiefly by laboratory exercises in chemistry, microscopy, pathology and bacteriology and clinical work in the wards of the Naval Hospital in which the student resides. The official duties of the Naval officer afloat and ashore are also taught. Each newly appointed Naval medical officer is sent to this school before being ordered to his first duty.

The wish and hope has no doubt occurred to many of my hearers who have considered this subject, that some day there will be established in this country a National Medical School for all the services, accessible to all medical officers of the National Guard. Such a school, uniting the scattered resources of all branches of the service, liberally provided for as it should be by the general Government, would be a most potent factor for good in advancing the great cause of preventive and curative medicine, as well as securing the economical and effective administration of the services themselves. But for this we must wait.

## APPENDIX.

GENERAL ORDERS, } HEADQUARTERS OF THE ARMY,  
No. 78. . . . } ADJUTANT GENERAL'S OFFICE,  
Washington, September 22, 1893.

By direction of the Secretary of War, upon the recommendation of the Surgeon General of the Army, the faculty of the Army Medical School, established by General Orders, No. 51, June 24, 1893, from this office, and regulations for the government of the school, are announced as follows:

### FACULTY OF THE ARMY MEDICAL SCHOOL.

Colonel *Charles H. Alden*, assistant surgeon general, U. S. Army, president of the faculty, and lecturer on the duties of medical officers.

Lieutenant Colonel *William H. Forwood*, deputy surgeon general, U. S. Army, professor of military surgery.

Major *John S. Billings*, surgeon, U. S. Army, professor of military hygiene.

Major *Charles Smart*, surgeon, U. S. Army, professor of military medicine and director of the chemical laboratory.

Captain *Walter Reed*, assistant surgeon, U. S. Army, professor of clinical and sanitary microscopy and director of the pathological laboratory.

Captain *Julian M. Cabell*, assistant surgeon, U. S. Army, assistant to professor of military surgery and instructor in Hospital Corps drill.

### THE COURSE OF INSTRUCTION.

"The course of instruction will be for four months, and will be given annually at the Army Medical Museum, in Washington City, commencing on the 1st day of November." It will include lectures on and practical instruction in—

1. The duties of medical officers in war and peace.
2. Military surgery, the care of the wounded in time of war, and hospital administration.
3. Military hygiene.
4. Military medicine.
5. Microscopy, sanitary and clinical; pathological histology, bacteriology, and urinology.
6. Hospital Corps drill, and first aid to wounded.

By permission of the Surgeon General, medical officers of the Army who desire to avail themselves of the course of instruction, and who are stationed in or near the city of Washington or who have a leave of absence which enables them to attend the course, may be admitted as pupils under the same regulations as apply to recently "approved candidates for admission to the Medical Corps of the Army."

### EXAMINATIONS.

At the termination of the course of instruction the "approved candidates for admission to the Medical Corps of the Army" will be examined by the several

professors, and their relative proficiency in each branch will be reported by the president of the faculty to the Secretary of War through the Surgeon General of the Army.

REGULATIONS.

1. The president of the faculty will be responsible for the discipline of the school.

2. The junior professor will act as secretary and will be responsible for all property pertaining to the school.

3. A faculty meeting will be held in the office of the secretary on the first Monday of each month from October to March, inclusive, and whenever called by the president of the faculty or the Surgeon General of the Army.

4. Resolutions adopted by the faculty relating to the course of instruction, the purchase of books and instruments, &c., will be submitted to the Surgeon General of the Army for his approval.

5. The president of the faculty will submit to the Surgeon General of the Army, on or before the 1st day of April of each year, a detailed report of the condition of the Army Medical School, including an account of the instruction given and the proficiency of the several pupils as shown by an examination made by each professor at the termination of his course.

6. The hours of instruction will be from 9 to 12 a. m., and from 1 to 4 p. m., daily, from November 1 to February 28, inclusive, with the exception of Saturdays, Sundays, legal holidays, and the week commencing December 25.

7. Pupils will be required to be present during the hours designated unless specially excused by the president of the faculty or by orders from the War Department.

8. When necessarily absent on account of sickness or other emergency, pupils will, as soon as practicable, send a written statement to the secretary of the faculty, explaining the reason for such absence.

9. The laboratories and library of the Army Medical School will be open for the use of pupils during the hours of instruction designated.

10. Pupils will be held strictly accountable for all instruments and apparatus issued to them for their personal use during the course of instruction; and for any loss or injury to books or apparatus belonging to the Army Medical School, when such loss or injury is due to carelessness or neglect.

11. Pupils in the Army Medical School, during the hours of instruction, will wear the undress uniform of the grade to which they belong, except when engaged in laboratory work, when a black cambric laboratory gown may be worn.

BY COMMAND OF MAJOR GENERAL SCHOFIELD:

R. WILLIAMS,  
*Adjutant General.*

OFFICIAL:

*Assistant Adjutant General.*



ARMY MEDICAL SCHOOL,  
WASHINGTON, D. C.

*Session of 1893-'94.*

ORDER OF DUTIES.

Daily, except Saturdays, Sundays, and holidays:

- 9 a. m. to 12 m .....Instruction in Pathological Laboratory.  
1 p. m. to 2.50 p. m. ....Instruction in Chemical Laboratory.  
3 p. m. to 4 p. m. ....Lecture.

Saturdays:

- 9.30 a. m. to 10.30 a. m., at Hospital Corps School of Instruction, Wash-  
ington Barracks....Practical Instruction in Litter and Ambulance Drill  
and First Aid.  
11 a. m. to 12 m., in Riding Hall, Fort Myer, Va....Practical Instruction  
in Equitation.

The lectures will be delivered as follows:

- Duties of Medical Officers.....Wednesdays.  
Military Surgery, &c.....Thursdays.  
Military Hygiene .....Fridays.  
Military Medicine.....Mondays or Tuesdays.

AUXILIARY COURSES—Mondays or Tuesdays.

- Bacteriology .....General Sternberg.  
Military Law.....Major G. B. Davis, Judge Advocate, U. S. A.  
Comparative Anatomy, &c.....Captain J. C. Merrill, Med. Dept. U. S. A.  
Medical Jurisprudence.....Dr. Robert Fletcher, F. R. C. S. Eng.  
Parasites in Man .....Prof. C. W. Stiles, M. D., Department of  
Agriculture.

WALTER REED,

*\*Capt. and Asst. Surg. U. S. A., Secretary of the Faculty.*

\*Since promoted Major and Surgeon.





