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School for Police as Planned at Berkeley

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A few years ago, the only requirement necessary for appointment as policeman was a political pull and brute strength. The Chief was usually a Ward Politician, and selected his subordinates from among his political assistants and their friends or friends of the administration. No preliminary training was necessary, and the officers were considered sufficiently equipped to perform their duties if they were armed with a revolver, club and hand-cuffs, and wore a regulation uniform.

The duties were simple, as might be expected: they consisted chiefly in patrolling beats with one eye closed, figuratively speaking, while care was taken not to see with the single open eye offenders who were friendly to the party then in power.

Most of the investigations of serious crimes were conducted on the trial and error plan. If an individual was suspected of crime, he was placed on the small book and detained until the officials had brow-beaten and man-handled, him to their heart’s content. If convinced that they had made an error, he was released and another suspect was subjected to the same treatment. This was often done without the slightest evidence against the innocent victim.

Tenure of office being uncertain, many of the officials made the most of their opportunity and levied tribute upon the painted women, gamblers, saloon keepers, and other evil doers. Collections were systematically conducted by patrolmen, and the proceeds were delivered to superior officers who distributed the funds among the favored ones. This was the era of incivility, ignorance, brutality and graft. Of course any institution built upon such a rotten foundation could not last long in this progressive age, and in such a progressive country as ours, and the battle waged by the pulpit and press soon made an impression upon the public, which demanded an improvement in the service.

Following the adoption of Civil Service Reform by a few of the cities, and the improvement in the organization that resulted therefrom, came the wide-spread use of this method for selecting applicants.
for positions on the police force. This marked the beginning of better police methods. Tenure of office was made more certain, pension provisions and increased compensation helped make the position a more desirable one, and, as a result, a better grade of men were enlisted in the service. Familiarity with laws, police regulations, first aid to the injured, are now preliminary requirements, and in some cities, schools are established for that purpose. Recruits are obliged to attend school, where they are instructed by experienced men before being assigned to do duty on the streets. Humane treatment of prisoners and courtesy in their dealings with the public, are demanded of all officers. Signal alarm systems, bicycles and motor vehicles, finger print and Bertillon identification methods, pawn shop record files and other record systems have added much to the efficiency of the present day force.

Detectives are usually selected from the uniform ranks, because of their special fitness for the work; among them may be found many keen, intelligent, conscientious officials who are devoted to their profession. In large cities, some of these men specialize in the investigation and prevention of particular crimes, and owing to their skilful efforts, professional thieves shun the localities in which these men operate. This is, however, true only in a limited sense. More often the investigation and prevention of crime is conducted in a bungling manner and important evidence is either not recognized or is destroyed.

A school for the special training of police officers is a requirement of the times. Those authorized and empowered to enforce the laws, rules and regulations which are intended for the better protection of the public should have some knowledge of the fundamental principles underlying human actions, more especially those actions which are commonly designated as criminal or contrary to law and order.

The need of special training for those who are to serve as police officers has long been felt. In the larger cities of Europe the members of the police departments receive thorough instruction in police methods and procedure. The efficiency of the departments is also greatly increased by giving police power to boards of health and other divisions of city management and control.

While police officers of American cities receive some instruction in police methods, there is little or no uniformity in the methods of instruction and the courses given are inadequate. Several attempts have been made in the United States to create schools or colleges for the instruction of police officers. Notable among these are attempts
made by Northwestern University at Evanston, Illinois, and by the police departments of the City of New York. Very recently Harvard University announced a special course of instruction for police officers.

For a period of nine years, the police department of Berkeley has given courses of instruction in police methods and procedure, on anthropology (Bertillon system), finger prints, etc., and from time to time authorities on criminology, on psychiatry, on anthropology and on many other related subjects, have lectured to the department, attendance upon these lectures being a requirement. The benefits from these somewhat fragmentary courses soon became apparent in many ways. So encouraging were the results that the department planned to arrange a more definite course of instruction.

The following is a brief outline of the school plan and the more or less tentative courses of instruction. A detailed outline of the courses, with suitable textbooks and other works of collateral interest, has been prepared.

The tentative organization of the school is to be composed of an Advisory Board consisting of the Mayor of Berkeley, the President of the Board of Health, the President of the Board of Education, the members of the City Council, a Director, a Dean, a Faculty and Special Lecturers.

A tentative faculty has been arranged for, consisting of the following members:

AUGUST VOLLMER, Director, and Instructor in Police Organization and Administration and Police Methods and Procedure.

ALBERT SCHNEIDER, M. D., Ph. D., Dean, and Instructor in Physics, Physiology and Anatomy, Micro-analysis, and Assistant in Criminology.

PAUL JEROME ANDERSON, M. D., Instructor in Psychiatry.

ALLEN F. GILLIHAN, M. D., Instructor in Public Health.

JOHN FORCE, M. D., Instructor in First Aid to the Injured.


A. R. MEHRTENS, Ph. C., Instructor in Chemistry.

H. N. ROWELL, M. D., Instructor in Criminology.

W. B. HERMS, M. A., Instructor in Parasitology and Assistant in Public Health.
H. J. SEARS, Ph. D., Instructor in Microbiology and Assistant in Public Health.
J. C. GEIGER, M. D., Instructor in Hygiene and Pathology.
FRANK D. STRINGHAM, Instructor in Criminal Law.
FRANK V. CORNISH, B. L., M. S., Instructor in Elementary Law.
B. D. M. GREENE, A. B., Instructor in Evidence.

Further additions are to be made to the faculty after the opening of the school. Lectures on special subjects will be given from time to time. Attendance upon the courses of instruction and the special lectures will be obligatory. Practical reviews, tests and examinations will be held from time to time.

The school as planned is in reality a part or branch of the Police Department, is in direct control of the Department, and is intended for the benefit of the men in the service of the Department. Thus far no provisions have been made to admit men not in the service.

It is hoped that within a short time the school will develop into an institution fully equipped in every way to prepare men for the police service. When this time arrives, applicants for admission to the school will be required to pass a rigid entrance examination and will devote their entire attention to the courses of instruction and to the special drills and exercises provided for them. Admission to the school will be limited to such men as are physically and mentally qualified to complete the course and to become efficient police officers. The discipline of the school will be such that the unfit, should any such gain entrance, will be weeded out before the close of the work of the first year. Men of good inheritance, physically, mentally, and morally, of suitable educational attainments, and trained to strict discipline, are required for police officers. Such men a properly equipped school for police officers should supply.

The following courses have been planned:

PROPOSED COURSES AND TEXT-BOOKS.

FIRST YEAR.

A. PHYSICS—First Course in Physics (Millikan and Gale).
B. CHEMISTRY—(Text to be selected).
C. BIOLOGY, PHYSIOLOGY AND ANATOMY—
    Outlines of Physiology (Jones and Bunce).
    Principles of Biology (Hamaker).
D. Criminology, Anthropology and Heredity—
   Being Well Born (Guyer).
   Experimental Sociology (Kellar).

E. Toxicology—
   Manual of Medical Jurisprudence and Public Health (Robertson).

SECOND YEAR.

F. Criminological Psychology—
   Outline of Psychobiology (Dunlap).

G. Psychiatry—
   Outlines of Psychiatry (White).

H. Criminology, Theoretical and Applied—
   The works by Krafft-Ebing, Max Nordau, Lombroso, Ellis, Ferrero, Goring, Healy, Goddard, and of other authorities are to be consulted.

I. Police Organization and Administration—
   The European Police (Fosdick).
   Police Administration (Fuld).

J. Police Methods and Procedure—
   Finger Print Classification (Henry).
   System of Identification (Bertillon).
   Criminal Investigation (Gross).
   Questioned Documents (Osborne).

THIRD YEAR.

K. Microbiology and Parasitology—
   Practical Bacteriology and Parasitology (Stitt).

L. Police Micro-Analysis—
   (No text-books required. The works by Winton and Schneider are to be consulted.)

M. Public Health—
   (No text required).

N. First Aid to the Injured—
   (Text-book to be selected).

O. Elementary and Criminal Law—
   (Text-books to be selected).

   [Special police drills and exercises are provided. The above arrangement of courses is subject to more or less change and redistribution.]
LIBRARY REFERENCE BOOKS REQUIRED FOR THE USE OF THE STUDENTS.

1. Elements of Water Bacteriology (Prescott and Winslow).
2. Practical Bacteriology and Parasitology (Stitt).
3. Medical and Veterinary Entomology (Herms).
5. Physical Diagnosis (Todd).
6. Textile Fabrics (Matthews).
7. Microscopy of Drinking Water (Whipple).
8. Infections and Parasitic Diseases (Langfeld).
9. The Female Offender (Lombroso).
10. Lombroso's Criminal Man (Ferrero).
13. Pathological Lying (Healy).
15. Experimental Sociology (Kellor).
16. Bacteriological Methods in Food and Drugs Laboratories (Schneider).
18. Powdered Vegetable Drugs (Schneider).
19. Hereditary Genius (Galton).
20. Degeneration (Lombroso).
21. The Individual Delinquent (Healy).
22. Der Verbrecher (Baer).
23. Idiocy and Imbecility (Ireland).
25. Heredity (Lithgow).
26. Die Objekte der Verbrechens (Oppenheim).
27. Insanity, Ancient and Modern (Tupe).
28. The Measurement of Intelligence (Terman).
29. Feeblemindedness—Its Causes and Consequences (Goddard).
30. Psychopathia Sexualis (Krafft-Ebing).
34. Legal Principles of Public Health Administration (H. B. Hemenway).
35. The Sources and Modes of Infection (Chas, V. Chapin).
36. Modern Theories of Criminality (DeQuiros).
37. Criminal Psychology (Gross).
39. The Individualization of Punishment (Sallielles).
40. Penal Philosophy (Tarde).
42. Criminality (Garofolo).
43. Criminality and Economic Conditions (Bonger).
44. Criminal Sociology (Ferri).
45. California Codes and Statutes.
46. Studies in Forensic Psychiatry (Glueck).
47. Blackstone’s Commentaries (Cooley’s Edition).
48. Wigmore on Evidence (Wigmore).
49. New Criminal Law (Bishop).
50. New Criminal Procedure (Bishop).
51. Criminal Law (May).
52. Principles of Judicial Proof (Wigmore).
53. Police Administration (Leonard Fuld).
55. Criminal Investigation (Gross).
56. Manuel de Police Scientifique (Reiss).
57. La Police et l’enade (Niceforo).
60. Modern Microscopy (M. I. Cross).
61. Manipulation of the Microscope (E. Bausch).
62. The Microscope and Its Revelations (W. B. Carpenter).
63. Photographic Metrique de (A. Bertillon).
64. Legal Photography (A. Bertillon).
65. La Photographic Judiciaire (R. A. Reiss).
69. Finger Print Instructor (F. Kuhne).
70. Finger Print Systems (L. Seymour).
71. Finger Print Classification (E. R. Henry).
72. Dactiloscopia Comprando del Neuvos Sistema Argentine (Juan Vucetich).
73. Decimal System (M. Dewey).
74. Modus Operandi in Criminal Investigation and Detection (L. W. Atcherly).
75. System of Identification (A. Bertillon).
III.  
OUTLINES OF THE COURSES.

A. PHYSICS.
   I. Constitution and composition of matter. Matter and energy.
   II. Properties and states of matter.
   III. Molecular energy.
      (1) Light and heat. Thermo-dynamics.
      (2) Gases and liquids.
   IV. Dynamics.
      (1) Pressure of liquids and gases.
      (2) Gravity.
      (3) Motion.
      (4) Projectiles.
   V. Electricity. Magnetism.
   VI. Sound. Hearing.
   VII. Light. Sight.
   VIII. Radioactivity.

B. CHEMISTRY.
   I. Chemical energy.
   II. Atomic and molecular hypotheses.
   III. Valence. Chemical nomenclature.
      Special tests.
   V. Inorganic compounds.
   VI. Organic compounds.
   VIII. Electrolysis. Ionization.
   IX. Colloidal suspensions.
   X. Colorimetry.
   XI. Physical chemistry.
   XII. Bio-chemistry.

C. BIOLOGY, PHYSIOLOGY AND ANATOMY.
   I. Cytology.
      (1) The cell, somatic and germatic.
      (2) Single-celled vs. many-celled plants and animals.
      (3) The germatic cells (Embryology).
   II. Biology—Lower plants and animals. Higher plants and animals.
III. Comparative anatomy and physiology.
IV. Human physiology and anatomy.
V. Normal structure and function of tissues and organs.
VI. Disturbed functional activities of tissues and organs.
VII. The ductless glands.
VIII. Origin and evolution of the special senses.
IX. Physiological physionomy.
   (1) The normal individual.
   (2) Variations in the mentality and morality of individuals.
   (3) Physical interpretation of character. Possibilities and limitations.
X. Vestigial structures and organs

D. Toxicology.
   I. Definitions—Medical and legal.
   II. Sources of poisons.
      (1) Drugs and chemicals.
      (2) Food and drink.
      (3) Plants and animals.
      (4) Vapors, gases.
   III. Manner of poisoning.
      (1) Accidental.
      (2) Suicidal.
      (3) Homicidal.
   IV. Symptoms of poisoning.
   V. Treatment of poisoning.
   VI. Detection of poisons.
      (1) Macroscopic.
      (2) Microscopic.
      (3) Chemical.

E. Criminological Anthropology and Heredity.
   I. Origin of man.
   II. Origin of races. Racial types.
   III. National types.
   IV. The rise and fall of nations.
   V. Civilization.
      (1) Definition.
      (2) Increment of civilization.
      (3) National kultur.
VI. Race degeneration.
VII. Eugenics.
VIII. Heredity.
(1) Epigenesis—Casper Wolff.
(2) Pangensis—Weismann.
(3) Mendelianism—Mendel.
(4) Hereditary genius—Galton.
(5) Hereditary crime and criminal tendencies—Lombroso.
(6) Hereditary disease tendencies.
IX. Sociology.
(1) Human society.
(2) Social institutions.
(3) Social reforms.
(4) Church and state.
(5) Settlement work.
(6) Philanthropy.
(7) Social crime prevention.
(8) National economic resources and development.

F. CRIMINOLOGICAL PSYCHOLOGY.
   I. Structure and function.
   II. Comparative psychology.
   III. The evolution of mental faculties.
   IV. The criminal mind.
   V. The emotions of criminals.
   VI. Mental tests and reactions.
   VII. The sense of right and wrong.
   VIII. Reasoning and judgment.
   IX. Do criminals suffer mentally?
   X. The psychology of the mob.

G. PSYCHIATRY.
   I. The nature of mental disorder.
   II. Classification of the mental disorders.
   III. Causes of mental disorder.
   IV. Treatment.
   V. General symptomatology.
   VI. Paranoia and paranoid states.
   VII. Manic-depressive psychoses.
   VIII. Paresis.
IX. Dementia precox.
X. The presenile, senile and ateriosclerotic psychoses.
XI. The infection-exhaustion psychoses.
XII. The toxic psychoses.
XIII. Psychoses associated with organic diseases and injury of the brain.
XIV. The symptomatic psychoses.
XV. Borderland and episodic states.

H. CRIMINOLOGY.

Introduction.

I. Definition.

II. Origin of crime, evolutional and historical.

III. Causes of crime.
   (1) Heredity and environment.
   (2) Wars, famines, catastrophes.
   (3) Passion, provocation.
   (4) Alcohol, tobacco, drugs.
   (5) Emotional crimes.
   (6) Insanity and other mental disorders.
   (7) Feeble-mindedness.
   (8) Ignorance and superstition.
   (9) Opportunity.
   (10) Pernicious laws.
   (11) Penal crimes.
   (12) Social factors.
   (13) Degeneracy, atavism:
   (14) Abnormal conditions.
       (a) Pregnancy.
       (b) Wasting diseases.
       (c) Communicable diseases.
       (d) Deformities.

IV. The criminal type.
   (1) The criminals of different nations. International criminal types.
   (2) Sex and crime.
   (3) Crime stigmata.

V. Colonization and segregation of criminals.

VI. Penal institutions.

Physical Abnormalities.

I. Giantism—Local and general.
II. Dwarfism—Local and general.
III. Albinoes—Abnormal pigmentation.
IV. Deaf-mutes.
V. Rubber skin.
VI. Human skeletons—Progressive atrophy.
VII. Obesity.
VIII. Bleeders (hemophilia).
IX. Rickets.
X. Goitre.
XI. Hermaphrodites so-called.
XII. Acephaly.
XIII. Supernumerary organs; rudimentary organs.
XIV. Multiple pregnancies.
XV. Hutchinson teeth.
XVI. Excessive hairyness, baldness (alopecia).
XVII. Arterio-sclerosis.
XVIII. Précocity. Retarded development.

_Mental and Moral Abnormalities or Delinquencies._

I. Perversions; factors and causes.

II. Sex-perversions.
   (1) Satyrasis.
   (2) Nymphomania.
   (3) Rape. Sex murders.
   (4) Other perversions; self-mutilation; etc.

III. Religious perversions.
   (1) Intolerance, fanaticism.
   (2) Witchcraft.
   (3) Inquisition.
   (4) New religions.
   (5) Döwieism, etc.

IV. Socialistic perversions.
   (1) Socialism.
   (2) Anarchy.
   (3) French commune, etc.

V. Moral perversions.
   (1) Prostitution.
   (2) Pathological lying.
   (3) Kleptomania.
   (4) Arson.
   (5) Wanderlust.
VI. Mental and educational perversions.
   (1) Megalomania.
   (2) Mental inflation.
   (3) Cults and schools.
   (4) Orientalism, hindooism, occultism.
   (5) Hypotheses vs. theories.

VII. Professional perversions.
   (1) Voodoo doctors.
   (2) Faith healers, drugless healers.
   (3) Chiropractics, hydropaths.
   (4) Laying on of hands, etc.
   (5) Clairvoyants, hypnotists.
   (6) Telepathists, spiritualists, etc.

Indirect Factors in Crime.

I. Prostitution.
II. Saloons, drunkenness.
III. Gambling.
IV. Apartment houses, hotels, flats.
V. Ignorance.
VI. Literature.
   (a) Dime novels.
   (b) Immoral literature.
   (c) Daily papers, magazines.
VII. Shows.
   (a) Dime museums.
   (b) Theaters.
   (c) Movies.

VIII. Drug addiction.
IX. Neurasthenia.
X. Hysteria.
XI. Epileptiform conditions.
XII. St. Vitus dance.
XIII. Paralysis.
XIV. Psychoses of pregnancy.
XV. Psychoses of menopause.
XVI. Psychoses of puberty.
XVII. Alcoholism, alcoholic insanity, delirium tremens.
XVIII. Syphilis and gonorrhea.
XIX. Cretinism.
XX. Hookworm.
XXI. Pellagra.
XXII. Phobias.
XXIII. Abnormal cravings.

*Crime Agencies and Criminal Weapons.*

I. Hypnotism.
II. Mesmerism.
III. Animal magnetism.
IV. Chloroform and ether.
V. Knockout drops.
VI. Explosives.
VII. Gas pipe, bludgeons, knuckles.
VIII. Fire arms.
IX. Knives.
X. Strangulation; the gag.
XI. Torture, threats.
XII. The burglar's kit.

*Criminal Injuries and Their Diagnosis.*

I. Gunshot wounds.
II. Knife wounds.
III. Injuries from blows.
IV. Use of knockout drops.
V. Use of chloroform and ether.
VI. Fainting and collapse, from fright or shock.
VII. Simulated injuries.
VIII. Evidences of strangulation.
IX. Injuries to base of skull.
X. Internal injuries.
XI. Fractures and dislocations.
XII. Gas asphyxiation.
XIII. Murders. Suicides.
XIV. Injury and death by accident.

*Criminal Methods.*

I. Burglaries.
II. Holdups.
III. Pocket picking, purse snatching.
IV. Train robberies.
V. Flat thieves.
VI. Bank robberies, store robberies.
VII. Porch climbers.
VIII. Society thieves, diamond robberies.
IX. Automobile thieves.
X. Horse and cattle thieves.
XI. Petty larcenies.
XII. Blackmailing methods.
XIII. Criminal organizations.
   (a) National.
   (b) Communal.
   (c) Local.
XIV. Ransoms.
XV. Disposal of stolen property.
XVI. Criminal code, honor among thieves.
XVII. Methods of hiding or covering the evidence of crime.
   (1) Subjective.
      (a) Disguises.
      (b) Masks.
      (c) Diversion.
   (2) Objective.
      (a) Fire.
      (b) Hiding and transfer of stolen property.
      (c) The innocent accomplice.

Preventive Crime.

I. Education, schools and colleges.
II. Literature, music and art.
III. Parks and playgrounds.
IV. Just laws.
V. Heredity.
VI. Capital and labor.
VII. Sanitation.
VIII. Moderation.
IX. Environment.
X. The family unit.
XI. Intelligent police.

I. Police Organization and Administration.
   I. Purpose.
   II. History.
   III. American police force.
      (1) Nonprofessional head of department.
      (2) Professional heads of department.
      (3) Uniformed force.
(4) Detectives.
(5) Private police.
(6) Discipline.
(7) Pensions.

IV. European police.
(1) Organization of departments.
(2) Heads of departments.
(3) Uniformed forces.
(4) Detectives.
(5) Discipline.
(6) Pensions.

J. Police Methods and Procedure.

Record Systems.

I. Complaint report.
   (1) Alphabetical.
   (2) Subject matter.

II. Lost and stolen property and pawn shop.
   (1) Alphabetical.
   (2) Numerical.
   (3) Dewey decimal system.

III. Modus operandi.

IV. Finger print.

V. Anthropometry.

VI. Anatomical.

VII. Criminal circular.

Systems of Identification.

I. Objects of systems.

II. History.

III. Anthropometry (Bertillon).
   (1) Measurements by means of mural graduations and caliper rule.
   (2) (a) Chromatic characters.
        (b) Morphological characters.
   (3) Statement of peculiar marks.
        (a) Description of the marks.
        (b) Localization of the mark.
        (c) Manner of announcing and recording marks.
IV. Finger prints.
   (a) Classification.
   (b) Filing and searching.

V. Criminal photography.
   
   Criminal Investigation.

I. Procedure.
II. Report writing.
III. Marks and traces.
   (1) Finger prints.
   (2) Foot prints.
   (3) Other marks.

IV. Crimes and criminals.
V. Questioned documents.
   (1) Handwriting characteristics.
   (2) Inks.
   (3) Paper.
   (4) Systems of writing.
   (5) Handwriting photography.

VI. Photography. Radiography.
   (1) Judicial photography.
   (2) Photo-micrography.
   (3) Development and printing.
   (4) Radiography.
      (a) Equipment.
      (b) Methods.
      (c) Value and uses.
   (5) Color photography.

Stigmata of Degeneration.

I. Physical abnormalities.
   (1) Symmetry—asymmetry.
   (2) Bilateral inequalities.
   (3) Giantism and dwarfism.
   (4) Supernumerary organs.

II. Mental and moral abnormalities.
   (1) Child wonders. Precocity.
   (2) Genius, mental dullness.

III. Physical stigmata.
   (1) Cranium, head, hair.
   (2) Face—ears, eyes, nose, mouth, etc.
   (3) Jaws and teeth.
   (4) Hands and fingers.
(5) Trunk—chest, abdomen.
(6) Pelvis. Legs, feet, toes.

IV. Mental and moral stigmata.

(1) Megalomania.
(2) Pathological lying.
(3) Homicidal tendency.
(4) Suicidal tendency.
(5) Kleptomania, arson, etc.
(6) Paranoiacs.
(7) Dulled or absent higher faculties.
(8) Drunkenness, vagabondage, gourmandage.
(9) Perversions.
   (a) Sex.
   (b) Emotional.
   (c) Religious.
   (d) Mental.

(10) Dulled or perverted sense of humor, of duty, of justice, etc.

Points of Observation in Physical Inspection.

I. Physical proportions.

II. Dress, personal care and personal appearance.

III. Anomalies and pathologic manifestations.

IV. Mental states.

K. Criminological Microbiology and Parasitology.

   (1) General microbiology.
   (2) Protozoology, amebiology.

II. Parasitology.

   (1) Pathological bacteria.
   (2) Animal parasites.
   (3) Parasitic yeasts and molds.

III. Immunology and serology.

   (1) Natural and acquired immunity.
   (2) Immunizing agents; sera, bacterins, etc.

IV. Zymology.

V. Pathology.

   (1) Communicable diseases.
   (2) Filth diseases.
   (3) Syphilis and gonorrhoea.

VI. Disease carriers. Transmission of infections.

VII. Bacterial contamination of foods and drinks.

VIII. Bacteriological evidence of crime.
L. Police Micro-Analysis.

I. Microscopy and micro-technique.
   (1) Light and its properties.
   (2) Reflection of light.
   (3) Refraction of light.
   (4) Lenses.
      (a) Simple lenses.
      (b) Aplanatic lenses.
      (c) Aberrations, spherical and chromatic.
   (5) Compound microscopes.
      (a) Mechanical parts.
      (b) Optical parts, oculars and objectives.
      (c) Properties.
      (d) Use and care.
      (e) Accessories — Hemacytometer, Micrometer scale, stage micrometer; polariscope; camera lucida.
   (6) The Ultra-microscope.
   (7) Micro-Technique.
      (a) Methods.
      (b) Reagents.

II. General Micro-Analysis.
   (1) Fibres, animal and vegetable.
   (2) Starches, flours and meals.
   (3) Dextrines.
   (4) Starch fillers.
   (5) Pastry; foods, general.
   (6) Baby foods; breakfast foods.
   (7) Spices and condiments.
   (8) Dairying products.
   (9) Canned foods.
   (10) Candies.
   (11) Powdered drugs.
   (12) Minerals.
   (13) Crystals.
   (14) Drinks.
   (15) Water, sewage, etc.
   (16) Animal tissues.
   (17) Sputum and pathological secretions, pus, etc.
   (18) Urine and urinary sediments.
   (19) Feces, stomach contents, etc.
   (20) Blood.
III. Criminological Micro-Analysis.

(1) Hair, human.
   (a) Source—head, beard, body. Texture
       (fine coarse, etc.)
   (b) Measurements—size, form.
   (c) Pigmentation—black, brown, light.
   (d) Pith—in young and old hair.
   (e) Size and arrangement of cells.
   (f) Bleached or dyed hair.
   (g) Natural and artificial curl.
   (h) Scalp epithelium—dandruff.
   (i) Sebaceous matter, natural and added.
       Powders, hair oils, etc.
   (j) Hair of youth and of old age, white hair.
   (k) Root of hair.

(2) Hair, animal.
   (a) Sheep, goat, llama, camel.
   (b) Hair of household pets.
   (c) Rodents—rats, mice, gophers, etc.
   (d) Cattle, horses, dogs, etc.
   (e) Cloth.

(3) Hair-like structure.
   (a) Butterfly scales.
   (b) Insect spines and spicules.
   (c) Spider web fiber and of wooly aphis, etc.
   (d) Silk.

(4) Stains and smears.
   (a) Macroscopical examination.
   (b) Taking samples.
   (c) Kinds of stains and smears.
       Sputum and nasal.
       Blood.
       Vomit.
       Fecal.
       Urinary.
       Foods and drinks.
       Drugs and chemicals.
       Fats, oils, paints.
       Dirt, soil and clay.
       Powders, flours, meals.

(5) Dust and dirt; deposits and accumulations.
   (a) Kinds and significance of.
In clothing, bedding, on shoes, gloves, etc.
In and about furniture.
In basement, kitchens, attics, outbuildings, sheds, etc.
(b) In and upon books, utensils, trunks, glassware, curtains, etc.
(c) In and upon office equipment.
Penholders and pencils.
Erasers.
Mucilages, pastes.
Furniture and fixtures.
(d) Taking samples.
(e) Macroscopical and microscopical examinations.
(f) Interpreting results of the findings.
Source of deposits.
Age of deposit.
Character of deposit, etc.

(6) Finger nail deposits.
(a) Character of deposits.
(b) Method of taking samples.
(c) Microscopical examination.
(d) Recording the microscopical findings.
(e) Interpreting the findings.

(7) Paper money; legal documents; bank notes, etc.
(8) Hand writing, invisible writing, etc.
(9) Special micro-chemical reactions.

M. Public Health.
I. Communicable diseases.
   (1) Description.
   (2) Transmission.
   (3) Control.
II. Conservation of child life.
   (1) Infant hygiene.
   (2) School inspection.
   (3) Playgrounds.
III. Occupational diseases.
   (1) Industrial diseases and accidents—and their prevention.
IV. Sanitation.
   (1) Water supplies.
   (2) Food supplies.
(a) Milk.
(b) Meat.
(c) Foodstuffs.
(3) Garbage disposal.
(4) Sewage disposal.
(5) Street cleaning.
(6) Housing.
   (a) Public.
   (b) Industrial.
   (c) Private.
(7) Nuisances.
V. Public health organization.
   (1) Federal.
   (2) State.
   (3) Municipal.
VI. Public health administration.
   (1) Public health laws and their enforcement.
N. FIRST AID TO THE INJURED.
   I. Resuscitation from
      (1) Gas, acid, fumes, coal gas.
      (2) Drowning.
      (3) Fainting.
   II. Sprains, dislocations and fractures.
   III. Hemorrhages.
      (1) External.
      (2) Internal.
   IV. Cauterizations, severe bruises.
   V. Temporary bandages.
   VI. Temporary splints.
   VII. Police assistance to
      (1) Police surgeon.
      (2) Physician.
      (3) Pharmacist.
   VIII. Ambulance service.
   XI. Emergency hospitals.
   X. Injuries of the mob.
      (1) Public meetings, indoor; in the open.
      (2) Riots; strikes.
O. LAW.
   I. Elementary Law.
   II. Criminal law and procedure.
   III. Evidence.