

Course of Study and Practical Instruction at the U. S. Military Academy.

(Books marked thus * are for reference.)
FIRST YEAR—FOURTH CLASS.

SUBJECT.	COURSE OF STUDY, TEXT-BOOKS, AND BOOKS OF REFERENCE.	
Mathematics.	C. Smith's Treatise on Algebra. Phillip's & Fisher's Elements of Geometry. Ludlow's Elements of Trigonometry.	C. Smith's Conic Sections. *Ludlow's Logarithmic Tables.
Modern Languages.	Williams' Composition and Rhetoric. Abbott's How to Write Clearly. Melklejohn's English Language. Douay's Elementary French Reader. Downer's First Book in French. Castarède's Treatise on the Conjugation of French Verbs. *Spiers' and Surene's French Pronouncing Dictionary.	De Peiffer's French Pronunciation. *Roget's Thesaurus of English Words. *Webster's Dictionary. *Smith's Synonyms Discriminated.
Drill Regulations, U. S. Army.	Practical Instruction in the Schools of the Soldier, Company and Battalion—Infantry. Theoretical Instruction in the School of the Soldier and Company. Practical and Theoretical Instruction in the School of the Cannoneer—Siege and Light Artillery. Theoretical and Practical Instruction in the Service of Security and Information. Exercises in applied Tactics, and Practice Marches—Infantry. Theoretical and Practical Instruction in Target Practice. U. S. Infantry and Light Artillery Drill Regulations. Firing Regulations for Small Arms. Manual of Security and Information, by the Department of Tactics.	
Use of the Sword, &c.	Instruction in Fencing with Rapier and Broad Sword, and Bayonet Exercise, and Military Gymnastics.	

SECOND YEAR—THIRD CLASS.

SUBJECT.	COURSE OF STUDY, TEXT-BOOKS, AND BOOKS OF REFERENCE.	
Mathematics.	C. Smith's Solid Geometry. Church's Descriptive Geometry, with its application to Spherical Projections, Shades, Shadows and Perspective. Bass' Differential Calculus. Johnson's Text Book on the Method of Least Squares.	D. A. Murray's Integral Calculus.
Modern Languages.	Fraser & Squair's French Grammar. Hennequin's Lessons in Idiomatic French. Böcher's College Series of French Plays, Vol. II. Roemer's Cours de Lecture et de Traduction. Revue Militaire des Armees Etrangères. Le Figaro. Eco de Madrid. Las Novedades. Pearson's, The Principles of Composition. *Willcox's Military Technical Dictionary. *Spiers' and Surene's French Pronouncing Dictionary.	Monsanto and Languellier's Spanish Grammar. Garner's Spanish Grammar. Traub's Spanish Verb and Spanish Pronunciation. Ramsey's Elementary Spanish Reader. El Capitán Veneno. *Appleton's New Spanish-English and English-Spanish Dictionary. *De Peiffer's French Pronunciation.
Drawing.	Constructive Problems in Plane Geometry. Point Paths. Topography and plotting of Surveys with lead pencil, pen and ink, and colors; construction of the various problems in Descriptive Geometry, Shades and Shadows, Linear Perspective and Isometric Projections; Practical Surveying in the Field. Field Reconnaissance Contouring, and Sketching with and without instruments; Theory of color and laying of tints; History of Cartography and Topography; Triangulation and large Surveys. Lectures on the foregoing. [Surveying.] *Reed's Topographical Drawing and Sketching, including Photography applied to	
Drill Regulations, U. S. Army.	Practical Instruction in the Schools of the Soldier, Company and Battalion—Infantry. Practical Instruction in the School of the Cannoneer—Light Artillery; and School of the Trooper—Cavalry; and Equitation. Practical Instruction in Small Arms Target Practice. Practical Instruction in the Service of Security and Information. Exercises in applied Tactics and Practice Marches—Infantry. *U. S. Army Drill Regulations. *Firing Regulations for Small Arms. *Manual of Security and Information, by the Department of Tactics.	
Practical Mil'y Engineering.	Practical Instruction in Surveying. *J. B. Johnson's Theory and Practice of Surveying. *Pence and Ketchum's Surveying Manual. *Webb's Engineering Instruments.	

a separate Dep't.

THIRD YEAR—SECOND CLASS.

SUBJECT.	COURSE OF STUDY, TEXT-BOOKS, AND BOOKS OF REFERENCE.
Natural and Experimental Philosophy.	Michie's Analytical Mechanics. Michie and Harlow's Practical Astronomy. Young's General Astronomy. Michie's Elements of Wave-Motion relating to Sound and Light. Practical Instruction in Astronomy.
Chemistry, Mineralogy, and Geology.	Tillman's Descriptive General Chemistry (3d Edition). Tillman's Elementary Lessons in Heat (3d Edition). Tracy's Anatomy, Physiology and Hygiene. Thompson's Elementary Lessons in Electricity and Magnetism (new and revised ed.). Tillman's Important Minerals and Rocks. LeConte's Elements of Geology (4th Edition). Practical Instruction in Chemistry, Electricity, and Mineralogy.
Drawing.	Free Hand Drawing and Landscape in black and white. Mechanical and Architectural Drawing in ink and colors; Military Landscape Sketching in the Field; Memory Drawing; Free-hand Mechanical Drawing without Instruments; Building Construction, working Drawings and Isometric Sections; Engineering and Ordnance Drawing; Lectures on all the foregoing subjects with stereopticon. *Read's Topographical Drawing and Sketching, including Photography applied to Surveying.
Drill Regulations, U. S. Army.	Practical Instruction in the Schools of the Soldier, Company and Battalion—Infantry. Theoretical Instruction in Drill Regulations—Infantry, Light Artillery and Cavalry. Practical Instruction in the School of the Cannoneer—Sea Coast Artillery. Practical Instruction in the Schools of the Troop and Squadron—Cavalry; and Equitation. *Dyer's Hand Book for Light Artillery.
Practical Military Engineering.	Practical Instruction in the Construction of Ponton Bridges; in laying Gun Platforms, and in the Construction of Revetments and Obstacles. *Official Publications of Signal Department, U. S. A. *U. S. Bridge Equipage and Drill. *Beach's Manual of Military Engineering.
Mil. Hygiene.	Lectures on Military Hygiene. *Woodhull's Military Hygiene.

FOURTH YEAR—FIRST CLASS.

SUBJECT.	COURSE OF STUDY, TEXT-BOOKS, AND BOOKS OF REFERENCE.
Civil and Military Engineering and Science of War.	Fiebege's Civil Engineering. Mercur's Attack of Fortified Places. Fiebege's Field Fortifications. Wagner's Organization and Tactics and the Service of Security and Information. Fiebege's Pamphlet on Permanent Fortification. Cambria Steel Hand Book on Structural Steel.
Law.	Davis' Elements of Law. Davis' Military Law. Davis' International Law (Latest Edition). Flanders' Exposition of the Constitution (revised ed.). *Birkhimer's Military Government and Martial Law.
History and Historical Geography.	Durny's General History (Latest Edition). *Labberton's New Historical Atlas.
Practical Military Engineering.	Demolitions. Practical Instruction in the Construction of all kinds of Military Bridges; in preparation and application of Siege Material; and in laying out Siege and Field Works. Practical Instruction in Military Reconnaissance. *Professional Papers No. 29, Corps of Engineers. *Woolwich Text Book of Military Engineering. *Beach's Manual of Military Engineering. *Chatham Text Book of Military Engineering.
Drill Regulations, U. S. Army.	Practical Instruction in the Schools of the Soldier, Company and Battalion—Infantry; of the Troop and Squadron—Cavalry; Packing and Equitation. Theoretical Instruction in Cavalry—Carter's Horses, Saddles and Bridles. Practical Instruction in the School of the Battery—Light, Horse, and Mountain Artillery. Practical Instruction in the Service of Security and Information; Exercises in applied Tactics; Practical Instruction in Small Arms Target Practice; Practice Marches—Infantry, Cavalry and Artillery; Lectures on Customs of Service, Military Etiquette, and Equipment; Lectures on Hippology, Saddling and Harnessing, Horseshoeing, Stable Management and Practical Work at Stables, &c. *Manual of Security and Information, by the Department of Tactics. *Dyer's Hand Book for Light Artillery. *Firing Regulations for Small Arms.
Ordnance and Gunnery.	Bruff's Ordnance and Gunnery. *Ingalls' Ballistic Tables. Practical Instruction in the Use of Ballistic Instruments and the Determination of Velocities and Pressures. *Ludlow's Logarithmic Tables.

often in Math.
depts. at other colleges.