

USAFI INFORMATION BULLETIN

This Bulletin supplements and brings up to date USAFI Catalog, Second Edition, March, 1944. [Distribution of the Second Edition Catalog has been completed.] Information in this Bulletin on course offerings and text materials available for distribution is complete as of 1 October 1945. *Additional Bulletins will be issued quarterly.*

Information herein applies only to services from Headquarters, USAFI, Madison 3, Wisconsin. Personnel overseas stationed near a USAFI Branch should write that Branch for information concerning services and courses.

Be sure you have the latest Bulletin.



Headquarters
United States Armed Forces Institute
Madison 3, Wisconsin

Contents

Throughout this Bulletin will be found references to comparable Sections in the USAFI Catalog, Second Edition. No revised information is included in this Bulletin concerning Section VI, How to Study Correspondence and Self-Teaching Courses, and Section VII, How to Organize Off-Duty Classes or Group Study, USAFI Catalog, Second Edition.

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Note.—The supply of USAFI Catalogs at Madison, Wisconsin, is exhausted. If copies are needed for reference they must be obtained locally.

*USAFI and Branches**

The United States Armed Forces Institute is an official Army and Navy school. Headquarters are at Madison 3, Wisconsin. Oversea branches of the United States Armed Forces Institute have been established as follows:

Africa-Middle East Branch, USAFI
APO 787, c/o Postmaster
New York, New York

Alaskan Branch, USAFI
University of Washington
Seattle 5, Washington

Antilles Department Branch, USAFI
APO 851, c/o Postmaster
Miami, Florida

Central Pacific Branch, USAFI
APO 958, c/o Postmaster
San Francisco, California

European Branch, USAFI
APO 413, c/o Postmaster
New York, New York

India-Burma Branch, USAFI
APO 885, c/o Postmaster
New York, New York

Mediterranean Branch, USAFI
APO 512, c/o Postmaster
New York, New York

Panama Canal Department Branch,
USAFI
APO 834, c/o Postmaster
New Orleans, Louisiana

South Pacific Branch, USAFI
APO 502, c/o Postmaster
San Francisco, California

Western Pacific Branch, USAFI.
APO 500, c/o Postmaster
San Francisco, California

Saipan Branch, USAFI

Students in these areas will obtain better service by enrolling with the nearest Branch.

*Replaces page 3, USAFI Catalog, Second Edition.

SECTION II

*Eligibility for Enrollment**

Members of the Armed Forces on active duty who are not engaged in basic training are eligible. Enlisted personnel must secure the approval of their immediate commanding officer. Public Health Officers are eligible for all services and facilities on the same basis as officers of the Army. Civilians, veterans, members of the Maritime Service, Merchant Marine, Coast Guard Auxiliary and Civil Air Patrol are not eligible. Personnel of the Marine Corps are eligible for college and university correspondence extension courses offered through USAFI, and for certain USAFI correspondence courses. Marines desiring correspondence instruction should apply to the Special Services Officer for specific information.

*Replaces page 4, paragraph 1, USAFI Catalog, Second Edition.

USAFI Correspondence Courses

A. Enrollment Procedure ¹

Study the list of courses. Choose the course you desire.

Since the course may be out of stock when the application is received, it is suggested that you indicate a second choice to avoid delay. Be sure you have had the proper preparation for the courses you choose. Obtain a USAFI application blank (WD AGO Form 0824) from the Information-Education Officer, Educational Services Officer or Marine Corps Special Services Officer; fill it out completely; secure the approval of your organization commander; and send the application blank (and the remittance, if you are not already enrolled) to the Commandant, United States Armed Forces Institute, Madison 3, Wisconsin. Remittance must be by money order, cashier's check, or certified check, and payable to the Treasurer of the United States, Madison 3, Wisconsin. *Do not send cash or personal checks.*

Service personnel stationed within continental limits of the United States may ordinarily enroll for only one course at a time. Personnel assigned to sea duty or who are overseas may enroll for two courses simultaneously. Upon successful completion of approximately one-half the lessons of one course, service personnel may apply for an additional course without payment of an additional \$2.00 fee.

B. Fees

For USAFI correspondence courses, enlisted and officer personnel of the Army, Navy, Marine Corps, and Coast Guard must submit a \$2.00 fee with the first application. The applicant then becomes eligible, without charge, for additional USAFI courses, provided an acceptable standard of work is maintained. No part of the original fee is refunded in case of disenrollment.

C. List of Institute Correspondence Courses ³

In the Second Edition Catalog certain Self-Teaching Courses were listed in this section. These courses are still listed here, but for a complete listing of Self-Teaching Courses (new ones have been added) see Section V. Where course numbers have been discontinued and the same courses are now available as EMs that fact is indicated.

High school level courses are numbered from 50 to 199. For example, the course designated H 55, "Bookkeeping I," is a high school level course.

Industrial and technical courses are numbered from 200 to 499. For example, Course J 200, "Aerodynamics," is a technical course.

College or university level courses are numbered from 500 to 999. For example, Course C 500, "Introduction to Accounting—Course I," is a college or university level course.

Course numbers prefaced with the letter "X" indicate new correspondence courses using different textbooks from old courses of the same number.

¹Supplements pages 9-15, USAFI Catalog, Second Edition.

²Supplements pages 7-8, USAFI Catalog, Second Edition.

³Replaces pages 39-68 USAFI Catalog, Second Edition.

HIGH SCHOOL COURSES

BUSINESS

H 50. Bookkeeping and Accounting I

(Self-teaching).¹ Enroll for EM 700 (sec. V). For Correspondence Course, see H 55. (T)²

H 51. Bookkeeping and Accounting II

(Self-teaching). Enroll for EM 702 (sec. V). For Correspondence Course, see H 56. (T)

H 52. Bookkeeping and Accounting III

(Self-teaching). Enroll for EM 705 (sec. V). For Correspondence Course, see H 57. (T)

H 53. Bookkeeping and Accounting IV

(Self-teaching). Enroll for EM 708 (sec. V). For Correspondence Course, see H 58. (T)

H 54. Bookkeeping and Accounting V

(Self-teaching). Enroll for EM 711 (sec. V). For Correspondence Course, see H 60. (T)

H 55. Bookkeeping I

Fundamental principles of bookkeeping and accounting involved in handling personal affairs, making and interpreting records of business transactions. 9 lessons. (T)

H 56. Bookkeeping and Accounting II

Merchandise bought and sold on account, cash receipts and payments, work sheet, financial reports, adjusting and closing of entries. 8 lessons. Prerequisite: H 50 (EM 700) or H 55 or equivalent. (T)

H 57. Bookkeeping and Accounting III

Advanced principles of bookkeeping and accounting illustrated through a retail store system. 9 lessons. Prerequisite: H 51 (EM 702) or H 56 or equivalent. (T)

H 58. Bookkeeping and Accounting IV

Principles of bookkeeping and accounting in a partnership business. 9 lessons. Prerequisite: H 52 (EM 705) or H 57 or equivalent. (T)

H 59. Business Arithmetic

Intensive drill in the arithmetic of daily business transactions. 20 lessons. Prerequisite: H 148 or equivalent. (T)

H 60. Bookkeeping and Accounting V

Principles of bookkeeping and accounting applied to corporations and manufac-

turing. 9 lessons. Prerequisite: H 53 (EM 708) or H 58 or equivalent. (T)

H 61. Economics

Consumption, production, exchange, distribution, public finance. 25 lessons. (T)

H 62. Economic Geography

Discontinued. Enroll for EM 230 (sec. V).

H 63. Business Law

Contracts, sales, insurance, negotiable instruments, agency; partnerships, corporations, types of property. 16 lessons. (T)

H 65. The Small Business

Problems of location and building, records and budgeting, marketing and merchandising, advertising and distribution, credit and office problems. 8 lessons.

ENGLISH

***E 1. Improving Your Reading, Part I**

(Self-teaching). Enroll for EM 155 (sec. V)

***E 2. Improving Your Reading, Part II**

(Self-teaching). Enroll for EM 156 (sec. V).

***E 3. Improving Your Reading, Part III**

(Self-teaching). Enroll for EM 157 (sec. V).

***E 4. Improving Your Reading, Part IV**

(Self-teaching). Enroll for EM 158 (sec. V).

H 83. English Grammar

(Self-teaching). Enroll for EM 100 (sec. V). For correspondence courses, see H 87. H 88. (T)

H 84. The Mechanics of English

(Self-teaching). Enroll for EM 101 (sec. V). For correspondence courses, see H 89. H 90. (T)

H 85. Building Good Sentences

(Self-teaching). Enroll for EM 102 (sec. V). For correspondence courses, see H 90. (T)

H 87. Ninth-Grade English—Course I

Grammar and composition with drill in word forms and punctuation, and reading of "Treasure Island" for appreciation. 18 lessons. Prerequisite: 8th grade English or equivalent. (T)

²Elementary school level subjects.

¹Courses marked "self-teaching" are not correspondence courses. Some self-teaching courses are listed under H, E, J, and C numbers for the purpose of cross-reference. For a complete listing of self-teaching courses under their Education Manual numbers, see Section V. Enrollment should be by EM number.

²The symbol "(T)" indicates that a test is available for the course.

H 88. Ninth-Grade English—Course II

Paragraph development; elementary work in narration and description; reading of "Ivanhoe" and "Julius Caesar" for appreciation. 19 lessons. Prerequisite: H 87 or equivalent. (T)

H 89. Tenth-Grade English—Course I

Composition and literature with review of fundamentals of grammar. "Silas Marner" and "The Merchant of Venice." 20 lessons. Prerequisite: H 88 or equivalent. (T)

H 90. Tenth-Grade English—Course II

Fundamentals of grammar, punctuation, sentence and paragraph structure. "The House of the Seven Gables" and "The Pocket Book of Verse" for appreciation. 16 lessons. Prerequisite: H 89 or equivalent. (T)

Note. A knowledge of the fundamentals of English grammar is desirable preparation for the following English courses:

H 91. Writings of English Authors—Course I

A study of English literature from the period of the Anglo-Saxons through Wordsworth's time. 15 lessons. (T)

H 92. Writings of English Authors—Course II

Study of the works of Coleridge, Scott, Byron, Shelley, Dickens, Tennyson, Kipling, Conrad, and other Victorian and modern authors. 15 lessons. (T)

H 93. Writings of American Authors—Course I

A survey of American literature. Reading of "The Last of the Mohicans." 16 lessons. (T)

H 94. Writings of American Authors—Course II

A continued survey of American literature, including works of the period following the Civil War; 20th Century writings. 14 lessons. (T)

H 95. Practical English Usage—Course I

Drill in mechanics of writing and practice in organizing ideas and putting them on paper. 25 lessons. (T)

H 96. Practical English Usage—Course II

Continued drill in mechanics of writing practice in organizing ideas and expressing them in writing. 25 lessons. (T)

HISTORY AND CIVICS

H 110. American History—Course I

(H 110 and H 112 replaced by H 117.)

H 112. American History—Course II

(H 110 and H 112 replaced by H 117.)

H 113. Civics

The organization of the American Government, and the powers and duties of its branches. 24 lessons. (T)

H 114. World History—Course I

From primitive man to the 18th Century. Civilizations of the near East, Egypt, Greece, Roman history; Medieval Europe, the great discoveries; American Revolution; the 18th Century. 23 lessons. (T)

H 115. World History—Course II

From mid-18th Century to World War II; rise and development of national states; international conflicts; economic development; colonial expansion; liberalism; World Wars I and II. 24 lessons. Prerequisite: H 114 or equivalent. (T)

H 116. Ancient History

Discontinued.

H 117. American History

(Replaces H 110 and H 112.)

The political, social, and economic aspects of the development of the United States from the old world background to the middle 1930's. 16 lessons. (T)

MATHEMATICS

H 133. Review Arithmetic I

(Self-teaching.) Enroll for EM 300 and EM 301 (sec. V). For correspondence course, see H 148. (T)

H 134. Review Arithmetic II

(Self-teaching.) Enroll for EM 302 and EM 303 (sec. V). For correspondence course, see H 148. (T)

H 135. Basic Mathematics

Replaced by H 175 and H 176.

H 136. Algebra, Course I

(Self-teaching.) Enroll for EM 304 (sec. V). For correspondence course, see H 149. (T)

H 137. Algebra, Course II

(Self-teaching.) Enroll for EM 305 (sec. V). For correspondence course, see H 149. (T)

H 138. Beginning Algebra

(H 138 and H 139 replaced by H 149.)

H 139. Intermediate Algebra

(H 138 and H 139 replaced by H 149)

H 140. Advanced Algebra

Discontinued

H 141. Plane Geometry—Course I

(Self-teaching.) Enroll for EM 306 (sec. V). For correspondence course, see H 143. (T)

H 142. Plane Geometry—Course II

(Self-teaching.) Enroll for EM 307 (sec. V). For correspondence course, see H 144. (T)

H 143. Plane Geometry—Course I

Rectilinear figures; parallel lines; polygons; inequalities; methods of proof; circles. 20 lessons. Prerequisite: H 149 or equivalent. (T)

H 144. Plane Geometry—Course II

Measurement of angles and arcs; locus; ratio and proportion; areas of polygons; regular polygons; trigonometric ratios. 20 lessons. Prerequisite: H 143 or equivalent. (T)

H 145. Solid Geometry

Theorems and proofs of three-dimensional figures; prisms; pyramids, cylinders, cones, and spheres. 20 lessons. Prerequisite: H 144 or equivalent. (T)

H 146. Plane Trigonometry

(Self-teaching.) Enroll for EM 311 (sec. V). For correspondence course, see H 147. (T)

H 147. Trigonometry

Trigonometric functions and use of tables; solution of right and oblique triangles; radian measure; fundamental identities; logarithms; graphical representations; inverse trigonometric functions. 20 lessons. Prerequisite: H 144 or equivalent. (T)

H 148. Review Arithmetic

A review of the fundamentals of arithmetic covering such topics as addition, subtraction, multiplication, division, fractions, decimals, percentage, square root, and graphs. 10 lessons. (T)

H 149. Beginning Algebra

(Replaces H 138, and H 139.) Formulas, equations, and graphs; algebraic fractions; special products and factors; powers, roots, and radicals; ratio, variation, and proportion. 10 lessons. Prerequisite: H 148 or equivalent. (T)

H 175. Basic Mathematics I

Arithmetic and geometry; fractions, decimals, and percentage; measurement of lengths and angles, circles and triangles; maps and charts; areas and volumes; constructions. 12 lessons. (T)

H 176. Basic Mathematics II

Algebra and trigonometry; graphs, formulas, signed numbers, and equations; trigonometric ratios, logarithms, and the slide rule. 11 lessons. Prerequisite: H 175 or equivalent. (T)

SCIENCE

H 151. General Science

Weather and climate; water; the earth's crust; heat; light; color; electricity; plant and animal life; health. 9 lessons. Prerequisite: H 148 or equivalent. (T)

H 152. Inorganic Chemistry

A nonlaboratory study of chemical definitions, laws, terminology, matter, elements; and their combinations; chemical equations and calculations. 12 lessons. Prerequisites: None; H 149 or equivalent desirable. (T)

H 153. Physics I—Mechanics

(Self-teaching.) Enroll for EM 400 (sec. V). For correspondence course, see H 156. (T)

H 154. Physics II—Heat, Sound, Light

(Self-teaching.) Enroll for EM 402 (sec. V). For correspondence course, see H 156. (T)

H 155. Physics III—Electricity

(Self-teaching.) Enroll for EM 404 (sec. V). For correspondence course, see H 156. (T)

H 156. Physics

A nonlaboratory study of fundamental principles involved in mechanics, heat, electricity, sound, and light. 11 lessons. Prerequisite: H 149 or equivalent; H 144 or equivalent desirable. (T)

H 157. Physiography

Discontinued.

SECRETARIAL

H 66. Fundamentals of Typewriting

(Self-teaching.) Enroll for EM 725 (sec. V). (T)

H 67. Business Typewriting

(Self-teaching.) Enroll for EM 726 (sec. V). For correspondence course, see 611. (T)

H 68. Army Typewriting

(Self-teaching.) Enroll for EM 904 (sec. V). (T)

H 71. Elementary Gregg Shorthand

Gregg's practical system of shorthand writing designed for all forms of stenographic work. 14 lessons. (T)

H 72. Advanced Gregg Shorthand

Advanced exercises for the development of efficiency and technical skill in the writing of shorthand. 12 lessons. Prerequisite: H 71 or equivalent. (T)

H 73. Shorthand

(Self-teaching.) Enroll for EM 720 (sec. V). For correspondence course, see H 71. (T)

H 74. Advanced Shorthand

(Self-teaching.) Enroll for EM 722 (sec. V). For correspondence course, see H 72. (T)

H 75. Business Correspondence

Writing of various types of business letters; sentence structure; use of vocabulary. 17 lessons. Prerequisite: A knowledge of the fundamentals of English grammar. (T)

611. Typewriting

Basic typewriting techniques; development of speed; common business forms and letters. 15 lessons. Prerequisites: None. Typewriter essential. (T)

TECHNICAL COURSES

AGRICULTURE

J 334. Farm Forestry

Establishment, care, and importance of farm forests or wood lots. 9 lessons.

ARMY CLERICAL

J 226. Military Correspondence

(Self-teaching.) Discontinued. Order TM 12-253 *Correspondence* through regular Adjutant General channels.

J 227. Military Orders

(Self-teaching.) Discontinued. Order TM 12-256 *Orders, Bulletins, Circulars, and Memoranda* and TM 12-256A *Order Digest* through regular Adjutant General channels.

J 228. Basic Military Records—Course I

(Self-teaching.) Enroll for EM 902 (sec. V).

J 229. Basic Military Records—Course II

(Self-teaching.) Enroll for EM 903 (sec. V).

AVIATION AND AUTOMOTIVE

J 200. Aerodynamics

Forces acting on airplanes; calculations; maneuvers; airplane characteristics and performance. 15 lessons. Prerequisite: H 144 or equivalent. (T)

J 201. Aeronautical Meteorology

Atmospheric conditions; clouds and winds; meteorological charts and reports; weather prediction. 15 lessons. Prerequisite: H 144 or equivalent. (T)

J 202. Aeronautical Navigation

Aeronautical charts; interception; wind drift; radius of action; radio navigation; instrument flying. 15 lessons. Prerequisite: H 144 or equivalent. (T)

J 203. Aviation Engines

Types, construction, parts, operation, and maintenance of aviation engines;

cooling, wiring, lubricating, fuel and ignition systems. 11 lessons. Prerequisite: H 148 or equivalent; H 149 desirable.

J 204. Airplane Maintenance—Part I

Airplane parts, instruments, assembly and rigging, handling and maintenance; aeronautical engineering. 7 lessons. Prerequisite: H 148 or equivalent; H 149 desirable.

J 205. Airplane Maintenance—Part II

Aircraft woodwork and metalwork; covering and doping materials; tools; protection of airplane parts. 7 lessons.

J 211. Auto Mechanics I—The Engine

(Self-teaching.) Enroll for EM 950 (sec. V). For correspondence courses, see J 216, J 217, J 218. (T)

J 212. Auto Mechanics II—Cooling, Lubrication, and Fuel Systems

(Self-teaching.) Enroll for EM 951 (sec. V). For correspondence courses, see J 216, J 217, J 218. (T)

J 213. Auto Mechanics III—Automotive Electricity

(Self-teaching.) Enroll for EM 952 (sec. V). For correspondence courses, see J 216, J 217, J 218. (T)

J 214. Auto Mechanics IV—The Power Flow

(Self-teaching.) Enroll for EM 953 (sec. V). For correspondence courses, see J 216, J 217, J 218. (T)

J 215. Auto Mechanics V—Chassis Units

(Self-teaching.) Enroll for EM 954 (sec. V). For correspondence courses see J 216, J 217, J 218. (T)

J 216. Automotive Power Plants

Construction, maintenance, and repair of power plant mechanism; specific variations of each part in different makes of cars. 14 lessons. Prerequisites: None; H 156 or equivalent desirable.

J 217. Automobile Chassis and Running Gear

Axles; steering gear; universal joints; brakes; lubrication; tire, fender, and body repairing. 9 lessons.

J 218. Automobile Electrical Equipment

Ignition systems; storage batteries; starting motors; voltage and current regulators; generators; electric equipment; engine tune-up. 15 lessons.

BUILDING CONSTRUCTION

J 231. Air Conditioning

Laws and properties of air, water, and steam; physiological principles of air conditioning; heat transmission infiltrations; heating and cooling loads; humidification; air duct design. 16 lessons. Prerequisite: H 149 or equivalent; C 713 desirable.

X 231. Air Conditioning, Heating and Ventilating

Basic principles and uses of equipment in various phases of modern air-conditioning, including heating, ventilating, air cooling, air moistening, air drying, and air cleaning. 11 lessons. Prerequisite: H 149 or equivalent; H 156 or equivalent desirable.

Students interested primarily in air conditioning are advised to enroll in J 231. Students interested in air conditioning and heating and ventilating should enroll X 231.

J 232. Basic Construction Work

Reading structural, steel and concrete blueprints; materials of structural engineering; cements and aggregates; concrete; mortar; steel reinforcing. 11 lessons. Prerequisite: H 148 or equivalent; H 149 and H 144 desirable.

J 233. Details of Concrete Structures

Foundations; piling; reinforced concrete buildings; retaining walls and dams, tanks and bins; bridges and culverts; conduits and chimneys; streets and high ways; waterproofing of concrete. 9 lessons. Prerequisite: H 148 or equivalent

J 234. Methods of Concrete Construction and Estimating

Forms and centering; field work in concrete construction; surveying for building construction; estimating concrete work; agreements and specifications. 9 lessons. Prerequisite: H 148 or equivalent.

J 235. Heating and Ventilation

(Replaced by X 231.)

J 236. Masonry Construction

Varieties and qualities of building stone; stone masonry; terra cotta; face, ornamental and common brickwork; plastering; floor and wall coverings. 8 lessons.

J 237. Metal Construction

Sheet metal work; ornamental metal work; builder's hardware; erection of steel building frames; fireproofing. 5 lessons.

J 238. Operations Preliminary to Building

Surveying for building construction; excavating, shoring, and piling; foundations; limes, cements, mortars; concrete construction. 5 lessons. Prerequisite: H 148 or equivalent; H 149 desirable.

J 239. Plumbing and Gas Fitting—Part I

Plumbing methods, tools, materials, and fixtures, and their uses in the installation of modern plumbing equipment. 12 lessons. Prerequisite: H 148 or equivalent

J 240. Plumbing and Gas Fitting—Part II

Tanks and pumps; domestic and institutional water supplies, plumbing inspection, design, plans, and specifications; gas production, distribution, and domestic uses. 11 lessons. Prerequisite: J 239; H 149 desirable.

J 241. Specifications, Estimating, and Contracts

Blueprint reading; specification writing; building superintendence; estimating of building costs; building contracts. 13 lessons. Prerequisite: H 148 or equivalent.

J 242. Structural Engineering—Part I

Design and construction of reinforced concrete buildings. 16 lessons. Prerequisites: Mathematics through calculus, J 384, J 386, and a preliminary course in reinforced concrete design or their equivalents. (T)

J 243. Structural Engineering—Part II

Design and construction of reinforced concrete arch bridges, slab and girder bridges, and culverts. 24 lessons. Prerequisites: Mathematics through calculus, J 384, J 386, and a preliminary course in reinforced concrete design or their equivalents. J 242 not necessary. (T)

J 244. Structural Engineering—Part III

Methods used in computing stresses in bridge trusses subjected to uniform loadings. 32 lessons. Prerequisites: Mathematics through calculus, and J 384 or equivalent. J 242 and J 243 not necessary. (T)

J 246. Wood Construction

Grades of timber and lumber; frame construction; thermal and sound insulation; roofs and roofing; dormers; forms for concrete; interior and exterior finish; millwork; stairs; the steel square. 13 lessons. Prerequisite: H 148 or equivalent.

DRAFTING AND APPLIED ART

NOTE. No equipment is supplied by USAFI for any drafting or applied art course.

7X1. Mechanical Drawing

Pencil drawings and tracings; geometrical drawings; machine sketching; projection drawing. 18 lessons. Prerequisite: H 144.

J 261. Freehand Drawing

Line and model drawing in pencil and charcoal; light and shade; figure drawing; the figure in action. 11 lessons.

J 264. Electrical Drawing

Principles of electrical drafting and their applications in the electric power-plant field. 10 lessons. Prerequisites: None; J 313 and 7X1 desirable.

J 265. Mapping

Planning maps; scales; topographic symbols; plotting traverses; contour maps; city and village maps. 8 lessons. Prerequisites: H 147 and 7X1 or equivalents.

J 266. Surfaces

Development of patterns of surfaces of various kinds of objects by parallel lines, on radial lines, and by triangulation. 7 lessons. Prerequisites: None; 7X1 desirable.

J 267. Airplane Drawing

General practices in airplane drafting; the drawing of the various parts of the airplane. 14 lessons. Prerequisites: None; J 266 desirable.

J 268. Elementary Architectural Drawing

Description of materials and methods of procedure used in making drawings; practice in drawing of three dimensional objects in various positions and from several angles, representation of a building. 9 lessons. Prerequisites: None; H 144 desirable.

J 269. Freehand and Ornamental Drawing

Drawing materials and methods; the drawing of lines, geometric ornaments, enriched moldings, scrolls, and conventional foliage. 5 lessons. Prerequisites: None; J 268 desirable.

J 275. Ship Drawing

Shipbuilding terms and definitions; types and principal dimensions of ships; drawing various parts of a ship considering both riveted and welded constructions. 13 lessons.

J 276. Practical Projection

Projections of points, lines, planes, solids bounded by planes, cylindrical sections, conic sections, and sections of solids in general. 7 lessons. Prerequisites: None; fundamentals of drafting desirable.

J 277. Sheet Metal Drafting

Methods of laying out patterns for sheet metal work in industry. 16 lessons. Prerequisites: None; J 266 and J 276 or equivalents desirable.

J 279. Art Techniques—Part I

Elements and principles of design; lettering; decorative lettering; elements of color; color harmonies; and appreciation; abstract and conventionalized design; applied design. 18 lessons.

J 280. Art Techniques—Part II

A continuation of J 279; applications of the principles of color and design. 17 lessons. Prerequisite: J 279.

J 281. Art Techniques—Part III

Discontinued.

J 282. Perspective and Composition

Parallel, angular, and pictorial perspective; pictorial composition. 10 lessons.

J 283. Drawing for Reproduction

Drawing for line engraving and for color reproduction. 8 lessons. Prerequisites: None; J 279 desirable.

J 284. Commercial Art

Decorative lettering; cover designing; newspaper illustrating; caricaturing and cartooning; magazine and book illustrating. 16 lessons. Prerequisites: None; J 279 desirable.

J 286. Pen and Brush Lettering

Discontinued.

J 287. Designing Show Cards

Discontinued.

ELECTRICITY, ELECTRONICS, AND RADIO

J 312. Electrical Measuring Instruments

Electrostatics and magnetism; measurement of electricity, resistance, and temperature; a-c and d-c electrical measurement; watt-hour meters and instrument transformers. 8 lessons. Prerequisite: H 149 or equivalent; H 156 desirable.

J 313. Elementary Electricity

Electric circuits and currents; resistance; cells and batteries; magnetism and electromagnetism; generators, motors, and meters. 10 lessons. (T)

J 314. Applied Electricity

Practical electric wiring; construction, maintenance, and repair of d-c armatures, fractional horsepower motors, a-c motors, and induction motors; storage batteries; electric heating and electric furnaces. 17 lessons. Prerequisite: H 148 or equivalent.

J 315. Principles and Applications of Electric Illumination

The science and art of illumination; materials and apparatus; specifications and requirements of indoor and outdoor lighting; floodlighting; electric signs. 9 lessons.

J 316. Radio for Beginners

(Self-teaching). Enroll for EM 415 (sec. V). (T)

J 317. Radio Code

(For group instruction only.)

Enroll for EM 406 (sec. V).

J 318. Radio Communication—Part I

Principles of radio communication, d-c and a-c circuits, resonance, electrical and sound waves, receivers, loudspeakers; vacuum tubes, amplifiers, oscillators. 15 lessons. Prerequisite: H 149 or equivalent; H 147 and H 156 desirable. (T)

J 319. Radio Communication—Part II

Modulation, detectors, and rectifiers; amplifiers, public address systems; broadcast radio receivers. 15 lessons. Prerequisite: J 318 or equivalent experience. (T)

J 320. Theory and Construction of Electrical Machines

Direct-current machines; alternating-current circuits and motors, alternators, transformers; synchronous converters, alternating-current rectifiers; industrial motor applications. 12 lessons. Prerequisites: None; H 147 desirable.

J 321. Electrical Engineering—Part I

Theory of design and operation of direct-current machinery. 15 lessons. Prerequisite: C 718 or equivalent. (T)

J 322. Electrical Engineering—Part II

Application of electrical theory to the construction and operation of d-c motors. 15 lessons. Prerequisite J 321 or similar background. (T)

J 323. Electrical Engineering—Alternating-Current Machinery

Alternating currents; principles of design, construction, and operation of the transformer and of the various types of a-c machines. 24 lessons. Prerequisite: Mathematics through calculus. (T)

MARINE ENGINEERING

J 346. Marine Engineering—Preparatory

Strength of materials; heat; steam; marine engine mechanisms; principles of steam turbine; fuels and combustion; elements of oil burning; oil burning under marine boilers; pulverized coal burning. 9 lessons. Prerequisite: H 148 or equivalent; H 149, H 144, and H 156 desirable.

MARINE NAVIGATION

J 497. Marine Navigation—Course I

All phases of modern piloting and dead reckoning, particularly for those requiring knowledge of the theory and practice of marine piloting. 13 lessons. Prerequisite: H 147 or equivalent.

J 498. Marine Navigation—Course II

A continuation of J 497 covering the essentials of modern nautical astronomy. 7 lessons. Prerequisite: J 497.

J 499. Marine Navigation—Course III

A continuation of J 498, consisting of a study of relative movement and nautical problems involving use of the maneuvering board. 27 problems. Prerequisite: J 498.

MARITIME LAW ENFORCEMENT

J 496. Coast Guard Law Enforcement

Sources of law; enforcement of criminal, customs, and navigation laws. 12 lessons.

MECHANICS AND ENGINEERING

J 381. Elements of Mechanics

Scalar and vector quantities; speed and velocity; motion; mass; force; energy; friction; gravitation; elasticity; fluids and gases. 16 lessons. Prerequisite: H 147 or equivalent. (T)

J 382. Mechanical Principles

Discontinued.

J 383. Elementary Fluid Mechanics

Pressure and equilibrium of liquids; laws of equilibrium and motion of liquids. 24 lessons. Prerequisites: J 384, J 385, and C 718 or equivalent. (T)

J 384. Statics

Forces; composition and resolution of forces; forces in equilibrium; simple structures; center of gravity. 24 lessons. Prerequisite: C 718 or equivalent. (T)

J 385. Dynamics

Moment of inertia; plane rectilinear and curvilinear motion; motion about a fixed axis; impulse and momentum. 27 lessons. Prerequisites: J 384 or equivalent and mathematics through calculus. (T)

J 386. Strength of Materials

Stresses and strains of elastic bodies in engineering structures and machines. 27 lessons. Prerequisites: Mathematics through calculus and J 384; J 385 desirable. (T)

J 388. Internal Combustion Engines—Introductory

Discontinued.

J 389. Principles of Diesel Engines

A basic course covering the fundamental principles of the operation, fuel injection, and parts of Diesel engines. 14 lessons.

J 390. Diesel Engines—Theory and Design
Discontinued

J 391. Steam Engines, Turbines, and Pumps—Part I

Various types of steam engines, the working of their parts; governors; engine testing. 10 lessons. Prerequisite: H 149 or equivalent.

J 392. Steam Engines, Turbines, and Pumps—Part II

Condensers; impulse and reaction types of steam turbines; engine and turbine installations; steam pump installation and management; reciprocating, power, and rotary pumps. 7 lessons. Prerequisite: J 391.

J 393. Refrigeration

Construction and operation of refrigeration systems; application of cold storage; insulation of refrigerated spaces; harvesting and use of ice in cold storage. 27 lessons. Prerequisites: None; H 156 desirable (7).

J 394. Municipal Engineering—Water Supply

Hydraulics, sources of water supply, irrigation, water-treatment plants, purification of water. 16 lessons. Prerequisite: H 149 or equivalent.

J 395. Municipal Engineering—Sewage Disposal

Municipal refuse: operation of sewage-treatment plants, sewerage, sewage treatment. 11 lessons. Prerequisite: H 149 or equivalent.

J 396. Fuel, Water and Oil Systems of Diesel Engines

Fuel oils, gasolines, and gases; air cleaners and cooling systems; oil purifying systems; engine efficiency. 12 lessons. Prerequisite: J 389 or equivalent experience.

J 399. Diesel Electric Power Plants

Characteristics of Diesel engines, principles of Diesel driven generators, governors, voltage regulators, parallel operation of generators, installation and maintenance of electric equipment. 5 lessons. Prerequisite: J 389 or equivalent experience.

METAL WORKING

J 362. Arc Welding

The techniques, practices, equipment, and underlying principles involved in arc welding. 8 lessons.

J 363. Gas Welding

Gas welding equipment; welding of carbon steel, iron and alloy steels, pipe, and nonferrous metals; overlaying and gas cutting. 7 lessons.

J 364. Patternmaking

Patternmaking equipment, operations, materials, requirements, and techniques. 13 lessons.

J 365. Foundry Practices—Part I

Green-sand molding operations, methods and appliances; core making; machine, dry-sand and loam molding; foundry sands and refractories; foundry equipment and processes; foundry chemistry. 12 lessons.

J 366. Foundry Practices—Part II

Metallurgy of iron, steel, and nonferrous metals; cupolas; mixing cast iron; steel, malleable and nonferrous casting. 12 lessons. Prerequisites: None; J 365 desirable.

J 367. Introduction to Machine Industry—

The expert machinist; hand tools; holding devices; measuring tools; precision tools; lathe and lathe tools; drills and drilling machines; reamers, taps, dies; lay-out. 11 lessons.

J 368. Lathe and Milling Machine Operation

Basic operations, techniques, and projects of lathes and milling machines. 10 lessons. Prerequisite: J 367 or similar background.

J 369. Shapers, Planers, and Grinding

Construction, operation, and uses of planers, shapers, and grinders. 9 lessons. Prerequisite: J 367 or similar background.

J 370. Milling Machines

Discontinued. See J 368.

J 374. Shapers and Planers, Grinding, Lay-out

Discontinued. See J 368 and J 369.

J 371. Metallurgy and Heat Treatment

Metallurgy of iron, steel, and nonferrous metals; metallography; heat treatment of iron and carbon steels, tools and dies; iron and steel castings, and nonferrous metals. 12 lessons. Prerequisites: H 149 or equivalent and elementary chemistry.

J 372. Metal Forging

Forge shop equipment; hand and machine forging; tool dressing; hardening and tempering; special forging operations and equipment. 7 lessons. Prerequisite: H 148 or equivalent.

J 373. Toolmaking

Principles, processes, materials, techniques, and tools involved in toolmaking. 14 lessons. Prerequisites: None; H 149, H 144, and experience in the machinist trade desirable.

PHOTOGRAPHY AND PLASTICS

J 412. Plastics

Replaced by X 412.

X 412. Plastics

History, testing, and properties of plastic materials; molds; processing fabrication, and finishing of plastic articles. 13 lessons. Prerequisites: None; Chemistry desirable.

J 416. Photography—Basic Processes

Use of the camera; developing and printing; taking of interior and unusual photographs. 16 lessons. Prerequisites: None; H 156 desirable. (No photography materials for this course are furnished by USAFL.) (T)

RAILWAYS AND TRANSPORTATION

J 421. The Steam Locomotive

Various types of steam locomotives, their construction and operation; headlights; break-downs; management; train rules. 13 lessons. Prerequisites: None; H 148 desirable.

J 422. Steam Locomotive Repair Work

Locomotive construction, troubles, checking and dismantling of individual parts, repair, and reassembly. 10 lessons. Prerequisites: None; H 149 desirable.

J 423. Locomotive Firing and Accessories

Locomotive boilers; oil-burning locomotives; hand firing, stokers, and injectors; feedwater heating equipment; superheaters; headlights, lubricators, and other accessories. 12 lessons. Prerequisite: H 148 or equivalent.

J 425. Air Brakes—Locomotives

Arrangement, operation, and disorders of the airbrake; brake equipment; compressors; automatic train control equipment. 9 lessons.

J 427. Railroad Car Inspection—Mechanical

Brakes and brake equipments, and their inspection; yard inspection of trains; tank cars; U. S. safety appliances; handling of explosives. 11 lessons. Prerequisite: H 148 or equivalent.

J 428. Railroad Car Repair—Part I

Repairs to draft gears, car trucks, carshop millwork, wooden box cars, stock cars, refrigerators, cabooses, and steel house cars. 9 lessons.

J 429. Railroad Car Repair—Part II

Repairs to passenger-train cars, freight car roofs and doors, steel-frame flat cars, steel gondola and hopper cars. 8 lessons. Prerequisites: None; J 428 not necessary.

J 430. Railroad Signaling

Automatic train control; track circuits; automatic signalling; mechanical, electric, and electropneumatic interlocking equipment; car-retard systems; centralized traffic control. 10 lessons. Prerequisites: None; H 156 desirable.

J 432. Railway Track Maintenance

Section foreman; track maintenance; railway organization and operation; roadmaster and his work; railway structures and terminals. 12 lessons. Prerequisite: H 148 or equivalent.

J 433. Railroad Rates

Reading and interpreting railroad rates; tariff regulations and rules; freight classifications and services. 22 lessons. Prerequisite: H 148 or equivalent.

J 434. Railway Transportation

The economics of transportation with special reference to railroad rate-making and the regulation of rail transportation. 36 lessons. Prerequisite: High school education or equivalent background.

J 435. Traffic Management

Planning, moving, and expediting rail, water, highway, and air freight; tracing freight shipments; packing goods for shipment; control of industrial freight; railroad regulations; parcel post; railway express. 27 lessons. Prerequisite: H 148 or equivalent; training or experience as a rate clerk desirable.

COLLEGE COURSES

Note. A high school education or equivalent experience is a general prerequisite for all college level courses.

ACCOUNTING

C 500 *Introduction to Accounting I*

The principles of general accounting providing a foundation for advanced and specialized courses. 16 lessons (T)

C 501. *Introduction to Accounting II*

Continuation of C 500; the various forms of business organization. 16 lessons. Prerequisite: C 500 or equivalent. (T)

C 502. *Intermediate Accounting I*

Advanced partnership and corporation accounting. 4 lessons. Prerequisite: C 501 or equivalent. (T)

C 503 *Intermediate Accounting II*

Accounting for branches, combinations, and reorganizations. 4 lessons. Prerequisite: C 501 or equivalent. (T)

C 504. *Cost Accounting*

Basic theory and technique involved in design and operation of cost accounting system. 16 lessons. Prerequisite: C 501 or equivalent. (T)

C 506. *Auditing*

An introductory course in the principles and procedures of auditing bookkeeping records. 21 lessons. Prerequisites: C 503 and C 504 or equivalent. (T)

C 507. *CPA Review Problems*

Foreign exchange; consignments; installment sales; liquidation; estates and trusts; banks; building and loan; insurance. 17 lessons. Prerequisite: C 506 or equivalent.

C 766. *Principles of Business Correspondence*

Discontinued. For Correspondence Course, see H 75.

ECONOMICS AND BUSINESS LAW

C 516. *Business Law*

Contracts and agency relationships. 27 lessons. (T)

C 517. *Business Law II*

Sales; negotiable instruments; partnerships; corporations; real property; bailments; carriers. 27 lessons. Prerequisite: C 516 or equivalent. (T)

C 518. *Business Law, Course III*

Discontinued.

C 526. *Elements of Economics I*

The industrial revolution; development of industry in the United States; value and exchange; theory of money and credit; banking systems; international trade; foreign exchange tariffs. 32 lessons. (T)

C 527. *Elements of Economics II*

Economic insecurity; wages; banking; taxation; monopolies; trusts; public utilities; socialism; fascism; communism; planning for prosperity. 24 lessons. Prerequisites: None; C 526 desirable.

C 528. *Economic History of the U. S.*

Economic developments from the early beginnings of American history to the present. 23 lessons. Prerequisites: None C 526 desirable.

C 530. *Money and Banking*

Basic course in the field of finance covering fundamental principles of money, foreign exchange, and banking procedures and practices. 27 lessons. Prerequisite: C 526 or equivalent. (T)

C 533. *Public Finance*

Discontinued.

C 535. *Principles of Life Insurance*

Investment services and business uses; types of policies; premiums; industrial and group insurance; legal interpretation. 16 lessons. (T)

C 536. *Economic Geography*

Discontinued.

EDUCATION AND PSYCHOLOGY

C 563. *General Psychology*

Basic course in the nature, aims, and methods of psychology. 22 lessons. (T)

C 566. *New-Type or Objective Examinations*

Discontinued.

C 567 *Principles of Adult Education*

Adult education, its operation, shortcomings, and need for improvement; problems of administration and future development of adult education program. 14 lessons. (T)

C 569. *Statistical Methods in Education*

Important concepts in statistics and methods of applying them in the field of education. 20 lessons. Prerequisite: H 149. (T)

ENGLISH AND JOURNALISM

C 581. Composition I

Replaced by X 531.

X 581. English Composition

(To replace C 581 and C 582.)

Current American usage and style in writing; punctuation; spelling; words; grammar; sentence and paragraph movement; principles of language development. 12 lessons. Prerequisites: None; a good foundation in English grammar desirable.

C 582 Composition II

(Replaced by X 581. C 582 is at present available to students having completed C 581.)

Further review of grammar and spelling; writing of business and friendly letters. 14 lessons. Prerequisite: C 581 or equivalent.

C 583. Survey of English Literature I

English literature from the beginning to the Romantic movement with special emphasis on the Elizabethan period. 12 lessons. Prerequisites: None; X 581 or equivalent desirable. (T)

C 584. Survey of English Literature II

The literature of England from the dawn of the Romantic movement to the World War. 12 lessons. Prerequisite: C 583 or equivalent.

C 585 The Short Story I

Discontinued.

C 587 Shakespeare, Course I

Discontinued. Enroll for EM 130 (sec. V).

C 588 Shakespeare, Course II

Discontinued. Enroll for EM 130 (sec. V).

C 589 History of English Literature

Discontinued.

C 590 English Literature: Romanticism

Development of the Romantic movement, including the works of Wordsworth, Coleridge, Byron, Shelley, and Keats. 24 lessons. Prerequisites: C 583 and C 584 or equivalent. (T)

C 591. The Contemporary Essay

A study of the various kinds of essays using the works of contemporary writers to show the development of the essay. 16 lessons. Prerequisite: A good command of the English language. (T)

C 592. English Literature: The Victorian Age

Writers of the Victorian period, including Tennyson, Ruskin, Carlyle, Browning,

Swinburne, the Pre-Raphaelites. 24 lessons. Prerequisites: C 583 and C 584 or equivalent. (T)

C 593. American Literature

A survey course in American literature, covering the period from the founding of Jamestown to the Civil War. 16 lessons. Prerequisites: C 581 and C 582 or equivalent desirable. (T)

C 594. American Literature II

The development of American poetry and prose from the Civil War to the present time. 16 lessons. Prerequisite: C 593 or equivalent. (T)

C 595. Newswriting

A beginner's course in journalism. The gathering and writing of news; introduction to copy editing and proofreading. 14 lessons. Prerequisite: A good foundation in English. (T)

C 596. Feature Writing

Steps in the preparation of feature article; types of stories; gathering of material, revision and analysis of the articles. 16 lessons. Prerequisite: College Freshman English. (T)

FOREIGN LANGUAGES

C 661. Spoken French

(Self-teaching). Enroll for EM 500 and EM 501 (sec. V).

C 662. Spoken Spanish

(Self-teaching). Enroll for EM 509 (sec. V).

C 663. Spoken Italian

(Self-teaching). Enroll for EM 503 and EM 504 (sec. V).

C 664. Spoken Portuguese

(Self-teaching). Enroll for EM 512 (sec. V).

C 665. Spoken Turkish

(Self-teaching). Enroll for EM 515 (sec. V).

C 666. Spoken Chinese

(Self-teaching). Enroll for EM 506 and EM 507 (sec. V).

C 681. Intermediate French I

Grammar; vocabulary; translation; reading for enjoyment. 24 lessons. Prerequisite: 1 year college French or 2 years high school French or equivalent. (T)

C 682. Intermediate French II

Continuation of C 681. Further review in grammar and composition, and other readings in French. 16 lessons. Prerequisite: 1 year college French or 2 years high school French or equivalent. (T)

C 683. Intermediate French Composition
Discontinued.

C 684. Intermediate German

Review of fundamentals of German grammar: conversational and written German. 24 lessons. Prerequisite: 3 semesters college German or 3 years high school German or equivalent. (T)

C 685. Elementary German Composition I

Selections from modern narrative and descriptive prose; assigned readings and reports. 23 lessons. Prerequisite: 3 semesters college German or 3 years high school German or equivalent.

C 687. Intermediate Spanish I

A review of Spanish grammar; translations; reading of *Pata de Zorra*. 27 lessons. Prerequisite: 1 year college Spanish or 2 years high school Spanish or equivalent. (T)

C 688. Intermediate Spanish II

Review of Spanish grammar; reading of a novel in Spanish for enjoyment. 27 lessons. Prerequisite: 1 year college Spanish or 2 years high school Spanish or equivalent. (T)

C 689. Intermediate Composition Spanish
Discontinued.

C 690. Intermediate Norwegian

A translation and composition course in Norwegian. 27 lessons. Prerequisite: 1 year college Norwegian or 2 years high school Norwegian or equivalent. (T)

**HISTORY, GOVERNMENT, AND
SOCIOLOGY**

C 623. Elements of Geography

Analysis and classification of physical geographic features, the processes and agents responsible for these features. 23 lessons. (T)

C 624. The Geography of Europe
Discontinued.

**C 626. History of the United States—
Colonial Period to the Civil War**

A survey of American history to the close of the Civil War, emphasizing political and economic aspects. 24 lessons. Prerequisites: None; C 635 or equivalent desirable. (T)

**C 627. History of the United States—Civil
War to the Present**

General survey of American history from close of Civil War to the present. 24 lessons. Prerequisites: None; C 626 or equivalent desirable.

C 629. Roman Empire
Discontinued.

**C 635. Europe—16th Century to End of
Napoleonic Wars**

Survey of European history from 1500 to about 1830, tracing social, political, and economic changes. 24 lessons.

**C 636. Contemporary European History—
World War I**

Discontinued.

**C 637. Contemporary European History—
World War I to World War II**

Discontinued.

C 638. Modern European History

Survey of modern European history from 1815 to 1939. 24 lessons.

C 639. The British Empire
Discontinued.

**C 640. Latin America and the United
States**

A contemporary study of diplomatic and commercial relations between the United States and the twenty Latin-American republics. 16 lessons. Prerequisites: None; C 643 or equivalent desirable. (T)

C 641. American Federal Government

Organization and administration of the U. S. Government, its historical development, its operation and current problems. 24 lessons. Prerequisites: None; H 113 desirable. (T)

C 642. American State Government

The plan, function, organization, methods, and practices of state governments. 24 lessons. Prerequisites: None; H 113 and C 641 or equivalents desirable.

**C 643. World Politics—World War I to the
Present**

Not available.

C 644. Municipal Government

Study of types of city government; the functions of the departments of city government; the relation between municipal government and citizens. 16 lessons. Prerequisites: None; H 113 and C 641 desirable. (T)

**C 645. The Nature of Society—introduc-
tion to the Field of Sociology**

Discontinued.

C 646. Social Problems
Discontinued.

C 647. Rural Life

A study of the farm community, its social and economic structure, aiming toward an understanding of methods and agencies involved in the everyday life of the modern farmer. 24 lessons. (T)

C 648. Criminology

Problems of crime, the criminal; physical, mental, hereditary, social, and economic factors which contribute to making a criminal. 24 lessons. Prerequisites: None; C 645 or C 646 or equivalent desirable. (T)

C 649. The Technique of Municipal Administration

Nature of municipal administration; relation of administrator to council; techniques of direction; training for the municipal service; finance and planning; legal services; municipal property management; public relations. 14 lessons. Prerequisite: Previous public administrative position in civilian life.

C 650. Municipal Finance Administration

Administrative approach to finance administration; municipal revenues; budget administration and expenditure control; municipal accounting; financial reporting; assessment administration; treasury management; municipal debt administration; long-term financial planning; centralized purchasing and storing. 14 lessons. Prerequisite: Previous public administrative position in civilian life.

C 651. Municipal Personnel Administration

Organization of the personnel agency; classification; salary and wage standardization; recruitment; promotion; service ratings; morale and conditions of employment; discipline, organizations of municipal employees; retirement systems. 13 lessons. Prerequisite: Previous public administrative position in civilian life.

C 652. Municipal Police Administration

The municipal police problem; organization and control; personnel; training; crime prevention; patrol division; criminal investigation; traffic control; communications; records; property and equipment; relations with other enforcement and identification units; the police and the public. 13 lessons. Prerequisite: Previous public administrative position in civilian life.

C 653. Municipal Fire Administration

Fire insurance classification of cities; organization for fire protection; personnel administration; water supply for fire service; fire alarm signaling systems; legal aspects for fire prevention; work of municipal and state fire prevention agencies; fire investigation and incendiaryism; records and measurement of results. 13 lessons. Prerequisite: Previous public administrative position in civilian life.

C 654. Municipal Public Works Administration

Public works as a municipal function; street improvement and maintenance; street cleaning and snow removal; street lighting; refuse collection and disposal; sewerage and sewage disposal; organization; personnel management; planning public works; measurements, records, and administrative reports; public relations. 13 lessons. Prerequisite: Previous public administrative position in civilian life.

C 655. Municipal Recreation Administration

Recreation areas and facilities; leadership; operation of playgrounds; operation of recreation buildings and facilities; city-wide activities and special services; typical recreation programs for different types of cities. 13 lessons. Prerequisite: Previous public administrative position in civilian life.

C 656. Local Planning Administration

Organization of city planning; base maps and fundamental data for city planning; basic studies for planning; zoning; housing; rehabilitation of blighted areas and slum eradication; recreation; subdivision control; public buildings and improving the appearance of the city; capital improvement programs; relationship of city planning to other planning units. 15 lessons. Prerequisite: Previous public administrative position in civilian life.

MANAGEMENT AND MERCHANDISING

C 541. Advertising

Fundamentals of advertising, preparing copy and developing campaign; individual advertisements; advertising media. 16 lessons. (T)

C 542. Merchandising

Importance and methods of retailing; forms of organization; special problems of merchandising. 16 lessons. Prerequisites: None; C 544 desirable. (T)

C 543. Cooperative Marketing

Historical background, basic philosophy, fundamental principles, possibilities, limitations, and practical methods of the cooperative movement. 24 lessons. Prerequisites: None; C 544 desirable.

C 544. Business Management—Policies and Methods

Modern business organization and management; organization, activities, and interrelation of the principal departments of a business. 24 lessons. (T)

C 545. Personnel Management

Replaced by X 545.

X 545. Personnel Management

A survey of the legal, administrative, and psychological problems of the personnel manager. 30 lessons. Prerequisites: None; C 544 desirable.

C 546. Office Management

Organization of a modern business office; lay-out of office; preparation and use of forms; selection, training, and supervision of employees; the profession of office management. 16 lessons. Prerequisites: None; C 544 desirable.

C 547. Labor Problems

Discontinued.

C 548. Introduction to Statistical Method

Methods of collecting, organizing, and interpreting data in different fields. 16 lessons. Prerequisite: H 149 or equivalent. (T)

MATHEMATICS

C 712. Plane Trigonometry

Trigonometric functions; graphs; right and oblique triangle solution by natural functions and by logarithms; applications to surveying, physics, and astronomy; inverse, exponential, and hyperbolic functions; trigonometric equations; De Moivre's Theorem. 16 lessons. Prerequisite: H 149 or equivalent. (T)

C 713. College Algebra and Trigonometry

Trigonometric functions; identities; equations; graphs; solution of right and oblique triangles; logarithms; inequalities; progressions; mathematic induction; theory of equations; probability; permutations and combinations. 32 lessons. Prerequisite: H 144 or equivalent.

C 714. Plane Analytic Geometry

Curve tracing and locus problems in Cartesian and polar coordinates; the straight line; and the circle. 16 lessons. Prerequisites: C 713 or equivalent and H 147 or C 712 or equivalent. (T)

C 715. Descriptive Geometry

The making and interpreting of the perspective drawing necessary in engineering, architecture, and various fields of design. 45 lessons. Prerequisites: H 144 or equivalent, and one semester of me-

chanical drawing on the college level. (Drawing materials for this course are not furnished by USAFI.) (T)

C 716. Spherical Trigonometry

Solutions of right and oblique spherical triangles and their applications. 8 lessons. Prerequisite: C 712 or equivalent. (T)

C 717. Differential Calculus

A study of elements of calculus and their applications in finding areas, volumes, velocity, and acceleration, motions of celestial bodies and atoms, flow of heat and electricity, probabilities, stresses of structural steel, compound interest, gas pressures, laws of growth and decay, and countless others. 40 lessons. Prerequisite: C 714 or equivalent. (T)

C 718. Integral Calculus

Methods of integration with applications to areas of plane curves, volumes of solids of revolution, length of curve, areas of surfaces of revolution, moments of area, centroids of revolution, and other problems in physics and mechanics. 40 lessons. Prerequisite: C 717 or equivalent. (T)

C 719. Solid Analytic Geometry

Discontinued. Enroll in EM 321 (sec. V).

C 724. Differential Equations

Fundamental types of ordinary differential equations, with applications to problems in geometry, physics, and mechanics. 16 lessons. Prerequisite: C 718 or equivalent. (T)

C 725. Engineering Mathematics I

Discontinued.

C 726. Engineering Mathematics II

Discontinued.

SCIENCE

C 748. General Geology

The earth, materials which compose it, and the way in which these materials are arranged. 24 lessons.

C 750. Weather and Climate

Causes of weather changes; major types of climate found in different parts of the world. 12 lessons. Prerequisite: Physical geography or general science; H 156 desirable. (T)

College and University Correspondence Courses

A. Enrollment Procedure¹

Write to the college or university of your choice, stating your educational background, the course or courses you wish to study, and whether you desire academic credit. Ask the university for a list of its courses available through USAFI with specific information as to the number, title, content, cost, and prerequisites for each course. If you desire credit, ask the college whether the course of your choice is acceptable. In case you wish credit at some institution other than the one offering the course you wish to study, you should make certain that the institution where you expect to receive credit approves the course.

When you have received the information and have chosen the course you desire, fill out completely two USAFI application blanks (WD AGO Form 0824) and submit to the Commandant, United States Armed Forces Institute, Madison 3, Wisconsin. Secure the signature of your organization commander in the proper place on the application blank. Inclose remittance with the application blank. Remittance must be by money order, cashier's check, or certified check payable to the university. Money orders must be drawn on the postmaster of the city where the university is located.

Service personnel stationed within the continental limits of the United States may ordinarily enroll for only one course at a time. Personnel assigned to sea duty or who are overseas may enroll for two courses simultaneously.

B. Fees²

For enlisted and officer personnel of the Army, Navy, Marine Corps, and Coast Guard, the Government will pay one-half the total cost of the course, or \$20.00, whichever is less. The student pays the remainder; in odd amounts the student pays the extra one-half cent. Service personnel enrolling in a university correspondence course do not pay the regular \$2.00 USAFI registration fee.

C. Fields of Study³

Courses in the following fields are offered by one or more of the co-operating colleges or universities. Keep in mind that this is a list of the fields of study. Within a given field there may be many different courses.

Accounting	Astronomy	Bookkeeping
Advertising	Aviation and Aeronautics	Botany
Agriculture	Biology	Building Construction
Air Conditioning	Blue Print Reading	Business
Art		Chemistry

¹ Supplements page 10, USAFI Catalog, Second Edition.

² Supplements pages 7-8, USAFI Catalog, Second Edition.

³ For detailed list of courses, see pages 74-89, USAFI Catalog, Second Edition.

Civics	Geology	Psychology
Criminology	Government	Radio
Economics	Health and Hygiene	Refrigeration
Engineering	History	Science
Architectural	Hydraulics	Shorthand
Chemical	Journalism	Sociology
Civil	Languages	Speech
Diesel	Law	Statistics
Electrical	Literature	Steam Engines
Industrial	Mathematics	Surveying and Map-
Mechanical	Mechanics	ping
Electricity	Navigation	Traffic Management
English	Philosophy	Typewriting
Finance	Physics	Writing
Forestry	Plumbing	Zoology
Geography	Photography	

D. Cooperating Colleges and Universities ⁴

The following is a list of the colleges and universities offering correspondence courses in cooperation with the United States Armed Forces Institute:

Alabama, University of, University, Alabama.	Eastern Kentucky State Teachers College, Richmond, Kentucky.
Arizona State Teachers College, Tempe, Arizona.	Florida, University of, Gainesville, Florida.
Arizona, University of, Tucson, Arizona.	Fort Hays Kansas State College, Hays, Kansas.
Arkansas State Teachers College, Normal Station; Conway, Arkansas.	Georgia, University System of, 223 Walton Street, N. W. Atlanta 3, Georgia.
Arkansas, University of, Fayetteville, Arkansas.	Hawaii, University of, Honolulu, T. H.
Ball State Teachers College, Muncie, Indiana.	Idaho, University of, Moscow, Idaho.
Brigham Young University, Provo, Utah.	Illinois, University of, Urbana, Illinois.
California, University of, Berkeley, California.	Indiana State Teachers College, Terre Haute, Indiana.
Canadian Legion War Services, Inc., 27 Goulburn Avenue, Ottawa, Ontario, Canada.	Indiana University, Bloomington, Indiana.
Central Missouri State Teachers College, Warrensburg, Missouri.	Iowa State Teachers College, Cedar Falls, Iowa.
Central State College, Edmond, Oklahoma.	Iowa, The State University of, Iowa City, Iowa.
Chicago, University of, Chicago, Illinois.	Kansas State Teachers College, Pittsburg, Kansas.
Colorado State College of Education, Greeley, Colorado.	Kansas, University of, Lawrence, Kansas.
Colorado, University of, Boulder, Colorado.	Kent State, University, Kent, Ohio.
Denver, University of, Denver, Colorado.	Kentucky, University of, Lexington, 29, Kentucky.
	Louisiana State University, University Station, Baton Rouge, La.

⁴Replaces pages 70-73, USAFI Catalog, Second Edition.

Loyola University, Chicago, Illinois.
 Massachusetts State Dept. of Education, 200 Newbury Street, Boston, Mass.
 Michigan State Normal College, Ypsilanti, Michigan.
 Michigan, University of, Ann Arbor, Michigan.
 Minnesota, University of, Minneapolis, Minnesota.
 Mississippi Southern College, Hattiesburg, Mississippi.
 Missouri, University of, Columbia, Missouri.
 Montana State University, Missoula, Montana.
 Morehead State Teachers College, Morehead, Kentucky.
 Murray State Teachers College, Murray, Kentucky.
 Nebraska, University of, Lincoln, Nebraska.
 New Mexico Highlands University, Las Vegas, New Mexico.
 New Mexico State Teachers College, Silver City, New Mexico.
 New Mexico, University of, Albuquerque, New Mexico.
 North Carolina State College, Raleigh, North Carolina.
 North Carolina, University of, Chapel Hill, North Carolina.
 North Dakota Agricultural College, State College Station; Fargo, N. Dak.
 North Dakota, University of, University Station, Grand Forks, N. Dak.
 Northern Michigan College of Education, Marquette, Michigan.
 Northern State Teachers College, Aberdeen, South Dakota.
 Northwest Missouri State Teachers College, Maryville, Missouri.
 Northwestern State College, Alva, Oklahoma.
 Ohio University, Athens, Ohio.
 Oklahoma Agricultural and Mechanical College, Stillwater, Oklahoma.
 Oklahoma, University of, Norman, Oklahoma.
 Omaha, University of, Omaha, Nebraska.
 Oregon State System of Higher Education, Eugene, Oregon.
 Pennsylvania State College, State College, Pennsylvania.
 Prairie View State Normal and Industrial College, Prairie View, Texas.
 Sam Houston State Teachers College, Huntsville, Texas.
 South Carolina, University of, Columbia, South Carolina.
 South Dakota, University of, Vermillion, South Dakota.
 Southeast Missouri State Teachers College, Cape Girardeau, Missouri.
 Southern Methodist University, Dallas, Texas.
 Sul Ross State Teachers College, Alpine, Texas.
 Tennessee, University of, Knoxville 16, Tennessee.
 Texas College of Arts and Industries, Kingsville, Texas.
 Texas Technological College, Lubbock, Texas.
 Texas, The University of, Austin 12, Texas.
 Graduate School, U. S. Dept. of Agriculture, Washington, D. C.
 Utah, State Agricultural College, Logan, Utah.
 Utah, University of, Salt Lake City, Utah.
 Virginia State College for Negroes, Ettrick, Virginia.
 Virginia, University of, Charlottesville, Virginia.
 Washington, University of, Seattle, Washington.
 Western Carolina Teachers College, Cullowhee, North Carolina.
 Western Kentucky State Teachers College, Bowling Green, Kentucky.
 Western Michigan College of Education, Kalamazoo, Michigan.
 Western State College of Colorado, Gunnison, Colorado.
 West Texas State Teachers College, Canyon, Texas.
 Wisconsin, University of, Madison, Wisconsin.
 Wyoming, University of, Laramie, Wyoming.

Education Manuals*

(Self-Teaching Texts, Reprints of Standard Texts, Language Materials, and GI Roundtable Manuals.)

A. Self-Teaching Texts and Reprints of Standard Texts

1. *Description.* Self-teaching texts are designed to be studied without the aid of an instructor and without submitting lessons for correction. They are especially written for individual study, but may be used for group study classes.

Reprints of standard texts, are intended primarily for group study. Students may, however, enroll for these texts on the same basis as self-teaching texts.

Instructor's Course Outlines, now available for certain courses, are designed to help classroom teachers to plan their work and teach effectively. They include such instructional aids as suggested schedules, assignments, topics for special emphasis, supplementary materials, and classroom methods. They may be requisitioned through channels, indicated in Paragraph 3, by Army installations on the basis of one outline for every ten copies of the Education Manual with which it is used.

When a student has completed the study of a self-teaching text or a reprint of a standard text he may apply for an end-of-course test in order to establish evidence of his accomplishment. Application for end-of-course test must be made on AFI Form 68, "Application for Institute Test for Examination."

2. Individual Enrollment Procedure and Fees.

a. *Enrollment procedure.* Make a first and second choice from the Education Manuals (EM) listed. Obtain an Institute application blank (WD AGO Form 0824) from the Information-Education Officer, Educational Services Officer, Coast Guard Educational Officer, or Marine Corps Special Services Officer; fill it out completely; secure the approval of your organization commander and send the application blank (and the remittance, if you are not already enrolled) to the Commandant, United States Armed Forces Institute, Madison 3, Wisconsin. By indicating a second choice, you may avoid delay if your first choice is out of stock when the application is received. Remittance must be by money order, cashier's check, or certified check, and payable to Treasurer of the United States, Madison 3, Wisconsin. *Do not send cash or personal checks.*

Service personnel stationed within the continental limits of the United States may ordinarily enroll for only one course at a time. Personnel assigned to sea duty or who are overseas may enroll for two courses simultaneously.

b. *Fees.* For USAFI courses (Educational Manuals) enlisted and officer personnel of the Army, Navy, Coast Guard, and Marine Corps, must submit a \$2.00 fee with the first application. The applicant then becomes eligible without charge for additional courses—provided an acceptable standard of work is maintained.

*This section replaces Section X, USAFI Catalog, Second Edition.

3. Requisitions for Classes—Army.

a. Education Manuals for use in classes are furnished by the Institute upon receipt of Requisition (WD AGO Form 445) properly signed by the appropriate officer and supported by a statement of the number of students who are expected to attend the classes. Requisitions *must* be submitted through military channels. (See par. 5b, Sec. VI, WD Cir. No. 68, 1944, for instructions for submitting requisitions for textbooks for classes.)

b. End-of-course tests are provided for members of classes upon receipt of AFI Form 68, "Application for Institute Test or Examination." Officers in charge may have each student fill out a test application blank and submit all applications for the class with a covering letter to USAFI, Madison 3, Wisconsin. This should be accomplished in advance to insure receipt of the tests when they are needed.

Under a new plan, effective 1 July 1945, end-of-course tests for group classes may be requisitioned by officers conducting off-duty classes based on Educational Manuals. End-of-course tests needed for completion of courses studied in group classes may be administered and scored by the officer and appropriate certificates issued to the students locally. Record of test results must be submitted to USAFI. It is anticipated that requisitions may be submitted in accordance with two plans, designated as "Plan A" and "Plan B."

Plan A—"Temporary Stock Plan." The temporary stock plan is designed for those installations where:

1. The educational program is limited in scope.
2. The class program is not continuous.
3. The officer does not wish to be responsible for a permanent stock of tests.

Plan B—"Permanent Stock Plan." The permanent stock plan is designed for those installations:

1. Which have a continuing education program in operation.
2. Where there is a qualified education officer experienced in administration of tests and willing to assume full responsibility for the maintenance of a permanent stock.

Detailed announcement of methods and procedures were made in USAFI Information Letter No. 6, 6 July 1945, and in USAFI Information Letter No. 7, 1 August 1945.

An officer not enrolled with the USAFI must enroll by submitting WD AGO Form 0824 and AFI Form 68, together with a \$2.00 fee (fee includes Education Manual and Test). No fee is required of enlisted men.

4. Distribution to Appropriate Headquarters and to Libraries—Army.

a. Regimental headquarters or similar organizations may requisition EM's for display and reference use. These headquarters will be supplied a sample kit of EM's covering the various fields of study. Requisition (WD AGO Form 445) must include a statement of the use to be made of kit and its accessibility to enlisted men.

b. Post libraries will be furnished one copy of each available EM upon requisition (WD AGO Form 445). Hospital libraries are furnished EM's for library use in accordance with the provisions of pars. 1 and 5, Sec. II, ASF Circular No. 74, 1944, and Sec. II, ASF Circular No. 108, 1944; AAF.

5. Requisition—Education Manuals—Navy, Coast Guard. Navy organizations desiring bulk supplies of Education Manuals for off-duty educational programs should communicate with the Educational Services

Section, Training, Bureau of Naval Personnel, Washington 25, D. C. Not all Education Manuals listed in this Information Bulletin, however, are available for bulk distribution through the Educational Services Section. A copy of NavPers 16410, "List of Materials Available to Navy and Coast Guard Organizations for use in Off-Duty Classes," may be obtained upon request to the Educational Services Section. Current information regarding the materials in stock is also published monthly in the Training Bulletin. Coast Guard requests for materials should be routed via the Commandant (PT).

6. *Requisition—Education Manuals—Marine Corps.* Marine Corps organizations attached to Fleet Marine Force, Pacific, desiring bulk supplies of EM's for off-duty educational programs will submit requisitions to Headquarters, Fleet Marine Force, Pacific. All other Marine Corps organizations will submit requisitions to Headquarters, Marine Corps via channels.

a. Self-teaching texts.††

AGRICULTURE	ARMY CLERICAL
<p>EM 800. What is Farming? Growing crops; feeding and breeding; bookkeeping; marketing; power machinery; study and planning. (T) †EM 800a. <i>Instructor's Course Outline</i></p> <p>EM 805. Dairy Farming The science and art of dairy farming; the types, selection, care, and management of cattle. (T) †EM 805a. <i>Instructor's Course Outline</i></p> <p>EM 810. Managing a Farm Selection of size, type, layout, and equipment for a farm; use of records; farm management problem. †EM 810a. <i>Instructor's Course Outline</i></p> <p>EM 815. Livestock Farming The art and science of breeding, feeding, and caring for farm animals. †EM 815a. <i>Instructor's Course Outline</i></p> <p>EM 820. Poultry Farming Fundamental principles of breeding, housing, feeding, disease control, and marketing in the successful poultry industry. (T) †EM 820a. <i>Instructor's Course Outline</i></p> <p>EM 826. Crops Planting, cultivating, harvesting, rotation, storing, marketing of crops; controlling soil erosion, crop diseases, and pests. (T) †EM 826a. <i>Instructor's Course Outline</i></p>	<p>EM 902. Basic Military Records—Course I The morning report; daily sick report; duty roster; company supply; pay allotments. **<i>Workbook for Basic Military Records—Course I</i></p> <p>EM 903. Basic Military Records—Course II The qualification card; service record; furlough certificate; discharge certificate; statement of service; personnel procedure. ** <i>Workbook or Basic Military Records—Course II</i></p> <p>EM 904. Army Typewriting The correct forms for all types of military typed materials. (T) **<i>Workbook for Army Typewriting</i></p>
BUSINESS	
	<p>EM 700. Bookkeeping and Accounting: Fundamental Principles—Course I Principles and terms; bookkeeping cycle; personal and family records. (T) †EM 700a. <i>Instructor's Course Outline</i></p> <p>EM 702. Bookkeeping and Accounting for a Mercantile Business—Course II. Application of the basic principles of bookkeeping to the records of a business that buys and sells merchandise. (T)</p>

Note. Self-teaching Texts are generally of High School level. All Self-teaching Texts listed in this section are available for individual enrollment as self-teaching courses. Enrollment should be by EM number.

*Issued on the basis of 1 to 20 with the EM with which it is to be used.

**Workbook issued on the basis of one workbook to each manual with which it is to be used.

†May be requisitioned on basis of 1 to 10 copies of the EM with which it is to be used.

††Replaces pages 91-93, USAFI Catalog, Second Edition.

†EM 702a. *Instructor's Course Outline*

EM 705. Bookkeeping and Accounting for a Retail Store—Course III

Advanced principles of bookkeeping illustrated through a retail store system. (T)

†EM 705a. *Instructor's Course Outline*

EM 708. Bookkeeping and Accounting—Course IV, Partnerships

Advanced principles of bookkeeping applied to partnerships. (T)

†EM 708a. *Instructor's Course Outline*

EM 711. Bookkeeping and Accounting—Course V, Corporations and Manufacturing

Application of advanced bookkeeping principles to a corporation and a manufacturing business. (T)

†EM 711a. *Instructor's Course Outline*

***EM 712. Solutions Manual for Bookkeeping and Accounting—Courses I-V**

Solutions in detail for EM's 700, 702, 705, 708, 711 and solutions for Test Exercises given in correspondence pamphlets (Catalog Nos. H 55, H 56, H 57, H 58, and H 60).

EM 714. The Small Business—Course I, Organization

Problems in starting a business; insurance; financial records and budgeting; banking; financial problems; relations of business and government; legal relations. (T)

†EM 714a. *Instructor's Course Outline*

EM 715. The Small Business—Course II, Operation

Housing, arrangement, lay-out; problems of purchasing, stock, marketing, merchandising, advertising, sales promotion, shipping, transportation, credit, and collection. (T)

†EM 715a. *Instructor's Course Outline*

EM 716. Introduction to Business Law—Course I

Sources and administration of law and the principles of law as applied to contracts, sale of goods, negotiable instruments. (T)

EM 717. Introduction to Business Law—Course II

Principles of law as applied to insurance, guaranty, bailments, agency, master and servant, partnerships, corporations, and property. (T)

See footnotes on page 24.

†EM 716-717a. *Instructor's Course Outline*

EM 720. Shorthand (Gregg)

Basic principles of shorthand, with vocabulary based on most frequently used words. (T)

****Gregg Shorthand Workbook**

†EM 720a. *Instructor's Course Outline*

EM 722. Advanced Shorthand (Gregg)

A course to develop speed in shorthand writing. (T)

***Set of 15 double-faced records**

†EM 722a. *Instructor's Course Outline*

EM 725. Fundamentals of Typewriting

Development of keyboard control; improvement of typing power; problem typing. (T)

†EM 725a. *Instructor's Course Outline*

EM 726. Business Typewriting

Practices to increase speed after mastery of typing fundamentals; business correspondence forms. (T)

****Business Typewriting Workbook**

†EM 726a. *Instructor's Course Outline*

EM 992. Establishing and Operating a Metal Working Shop

Significant factors in running successful metal working shops from the initial choice of location and equipment through the direction of publicity, personnel, finance, and records.

EM 996. Establishing and Operating a Small Sawmill Business

How to manage a sawmill; special problems such as character of timber areas, favorable location of sawmill, logging, how to refine output, grading, mill waste.

EM 997. Establishing and Operating a Shoe Repair Business

How to run a shoe repair shop with emphasis on selecting a location, getting established, buying and controlling stock, advertising, special customers, services, operating costs, and records.

ENGLISH

EM 100. English Grammar

Basic elements of English grammar; how to avoid grammatical errors. (T)

†EM 100a. *Instructor's Course Outline*

EM 101. The Mechanics of English

Mechanics of English including punctuation, spelling, and use of the dictionary; writing of letters, money orders, and telegrams. (T)

†EM 101a. *Instructor's Course Outline*

EM 102. Building Good Sentences

Sentence structure, with practice in expressing a thought and transforming a bad sentence into a good one. (T)

†EM 102a. *Instructor's Course Outline*

EM 612. America in Literature

Selections from the writings of American authors of the past century and a half, depicting American life. (T)

EM 613. A Study Guide to Accompany America in Literature

(To be used with EM 612.)

†EM 612-613a. *Instructor's Course Outline*

HISTORY AND GOVERNMENT

EM 200. American History—Course I

Rise of American democracy from 1492-1840. (T)

EM 201. American History—Course II

Democracy's struggle and triumph over forces of special privilege in the United States between 1840 and 1942. (T)

EM 202. American History—Course III

Industrialization of America from colonial times to the present. (T)

EM 203. American History—Course IV

Social and cultural America; rise of America as a world power. (T)

†EM 200-203a. *Instructor's Course Outline*

EM 204. History of Modern Europe—Course I

Absolute government and democratic revolution; the history of Europe during the seventeenth and eighteenth centuries (1600-1815). (T)

†EM 204a. *Instructor's Course Outline*

EM 205. History of Modern Europe—Course II

Democracy, nationalism, and Industrial Revolution; the history of Europe in the nineteenth century. (T)

†EM 205a. *Instructor's Course Outline*

EM 206. History of Modern Europe—Course III

Imperialism and world conflict; the history of Europe from the late nineteenth century to the present time. (T)

†EM 206a. *Instructor's Course Outline*

EM 209. History of China

History of the Chinese people from the prehistoric period to 1944. (T)

†EM 209a. *Instructor's Course Outline*

EM 214. American Government—Course I
Foundations of American Government. (T)

EM 215. American Government—Course II

Functioning of local, state, and national governments; making and administering laws, activities of our Government in conservation of natural resources, public welfare, health, education, recreation, social security; aiding, regulating, and conducting business. (T)

EM 216. American Government—Course III

Government finance, foreign policy, and the rights and duties of the citizen. (T)

†EM 214-216a *Instructor's Course Outline*

MATHEMATICS

EM 300. Review Arithmetic—Textbook I

Addition, subtraction, multiplication, and division of whole numbers and fractions. (T)

****EM 301. Review Arithmetic—Practice Book I**

(For use with EM 300.)

EM 302. Review Arithmetic—Textbook II

Decimals; percents; graphs; applications of arithmetic. (T)

****EM 303. Review Arithmetic—Practice Book II**

(For use with EM 302.)

†EM 300-302a. *Instructor's Course Outline*

EM 304. A First Course In Algebra—Part I

General and directed numbers; formulas and equations; graphs; simultaneous linear equations; multiplication and division of algebraic numbers. (T)

†EM 304a. *Instructor's Course Outline*

EM 305. A First Course in Algebra—Part II

Special products and factors; algebraic fractions; powers, roots, and radicals; ratio, proportion, and variation. (T)

†EM 305a. *Instructor's Course Outline*

EM 306. Plane Geometry—Course I

Fundamental constructions; proofs; triangles; parallelograms; circles. (T)

†EM 306a. *Instructor's Course Outline*

EM 307. Plane Geometry—Course II

Constructions, locus, ratio and proportion, polygons, geometry in aeronautics. (T)

†EM 307a. *Instructor's Course Outline*

EM 308. *Basic Mathematics—Course I*

Review of arithmetic, the fundamental principles of geometry. (T)

†EM 308a. *Instructor's Course Outline*

EM 309. *Basic Mathematics—Course II*

Fundamental principles of algebra and trigonometry. (T)

†EM 309a. *Instructor's Course Outline*

EM 310. *Solid Geometry With Solutions*

Geometrical properties and proofs of three-dimensional figures. (T)

†EM 310a. *Instructor's Course Outline*

EM 311. *Plane Trigonometry*

Trigonometric functions; reduction formulas; graphs; identities and equations; solution of triangles; logarithms. (T)

†EM 311a. *Instructor's Course Outline*

MECHANICS

EM 950. *Auto-Mechanics—Course I*

Design, operation, and service of the automobile engine. (T)

EM 951. *Auto-Mechanics—Course II*

Cooling, lubrication, and fuel systems. (T)

EM 952. *Auto-Mechanics—Course III*

Automotive electricity. (T)

EM 953. *Auto-Mechanics—Course IV*

Power flow in an engine; clutches; transmissions; axles; frames; car suspension. (T)

EM 954. *Auto-Mechanics—Course V*

Operation and servicing of ride control units, springs, front axles, steering, gears, brakes, wheels, and tires. (T)

*EM 950-954a. *Instructor's Course Outline*

SCIENCE AND RADIO

EM 400. *Physics—Course I*

The field of mechanics from a discussion of the properties of matter through basic principles of machines. (T)

***Workbook for Physics—Course I*

*EM 400a. *Instructor's Course Outline*

EM 402. *Physics, Course II*

Principles and applications of heat, sound, and light. (T)

***Workbook for Physics—Course II*

See footnotes on page 24.

*EM 402a. *Instructor's Course Outline*

EM 404. *Physics, Course III*

Basic principles of electricity and radio. (T)

***Workbook for Physics—Course III*

*EM 404a. *Instructor's Course Outline*

EM 415. *Radio for Beginners*

Principles, theories, equipment, and methods of radio transmission and receiving. (T)

*EM 415a. *Instructor's Course Outline*

EM 416. *Electricity for Beginners*

Electric current; magnetism; generators; motors. (T)

*EM 416a. *Instructor's Course Outline*

EM 286. *Elements of Healthful Living*

Personal and community health and health problems. (A college level course) (T)

EM 287. *Personal and Community Health*

(A study guide to accompany EM 286.)

*EM 286-287a *Instructor's Course Outline*

EM 495. *The Human Organism and the World of Life*

A broad view of scientific knowledge concerning the processes of life. (A college level course) (T)

*EM 495a. *Instructor's Course Outline*

EM 496. *Biological Science*

(A study guide to accompany EM 495.)

EM 496a. *Instructor's Course Outline*

READING

EM 155. *Improving Your Reading—Book One*

Assistance for persons learning to read.

EM 156. *Improving Your Reading—Book Two*

A continuation of EM 155, with sentences and paragraphs to read.

EM 157. *Improving Your Reading—Book Three*

A continuation of EM 156, with stories, articles, and suggestions for getting the meaning of sentences and gathering facts from the material read.

EM 158. *Improving Your Reading—Book Four*

Learning to remember material read, to organize ideas, to find information quickly, and to read rapidly.

MISCELLANEOUS

EM 600. *How to Sing and Read Music*

(For group instruction only. Not available by individual enrollment. Manual is based upon and is to be used with a number of phonograph records.) Facts

worth knowing about close harmony, and hints on improvising parts for familiar songs.

EM 905. *Prison Work as a Post-war Career*

(Not available for group study.) Set-up of the federal prison system and the advantages of entering such work as a postwar career. (T)

b. Reprints of standard texts††

AERONAUTICS

EM 910. *Elements of Aeronautics*

(HS) (Pope and Otis, 1941.) Aerodynamics; aeronautical meteorology; navigation. (T)

†EM 910a. *Instructor's Course Outline*

EM 911. *Teacher's Manual and Key to Elements of Aeronautics

AGRICULTURE

EM 856. *Successful Poultry Management*

Discontinued. See EM 820, *Poultry Farming*.

EM 820. *Poultry Farming*

(M. A. Jull, 1945.) Husbandry practices, marketing methods, and competent management in a poultry enterprise.

EM 858. *Crop Management and Soil Conservation*

(HS) (Cox and Jackson, 1937.) Major operations required for successful growing and marketing of crops; reducing cost of production; improving crop quality; maintaining soil fertility; marketing efficiently. (T)

EM 861. *Farm Buildings*

(C) (Carter and Foster, 1941.) Economics, cost, environment, arrangement, materials, and structure of farm buildings.

†EM 861a. *Instructor's Course Outline*

EM 862. *Farm Shop Practice*

(HS) (M. S. Jones, 1939.) Farm woodwork and carpentry; tool sharpening and fitting; cold metalwork; pipework; soldering and sheet metalwork; blacksmithing; harness, belt, and ropework.

****Manual of Farm Shop Practice (Workbook)**

†EM 862a. *Instructor's Course Outline*

Note. Key to level and type:

HS—Reprint of a standard high school textbook.

C—Reprint of a standard college textbook.

*Issued on the basis of 1 to 20 with the EM with which it is to be used.

**Workbook issued on the basis of one workbook to each manual with which it is to be used.

†May be requisitioned on the basis of 1 to 10 copies of the EM with which it is to be used.

††Replaces pages 93-96, USAFI Catalog, Second Edition.

EM 864. *Farm Records*

(C) (J. A. Hopkins, 1942.) Practical applications of accounts and records in the management of a farm.

†EM 864a. *Instructor's Course Outline*

EM 866. *Marketing of Farm Products*

(HS) (Norton and Scranton, 1937.) Marketing problems of the individual farmer, including an introduction to co-operative marketing.

†EM 866a. *Instructor's Course Outline*

EM 870. *Dairy Cattle*

(C) (Yapp and Nevens, 1941.) Selection, feeding, and management of dairy cattle herds.

†EM 870a. *Instructor's Course Outline*

EM 871. *Animal Sanitation and Disease Control*

(C) (R. R. Dykstra, 1942.) Symptoms, causes, prevention, and control of animal diseases and ailments.

†EM 871a. *Instructor's Course Outline*

EM 873. *Beef Cattle*

(C) (R. R. Snapp, 1939.) Feeding and management of beef cattle in the Corn Belt States.

†EM 873a. *Instructor's Course Outline*

EM 874. *Pork Production*

(C) (W. W. Smith, 1937.) Feeding, management, care, cost, marketing, judging, breeding, and disease prevention in hogs.

†EM 874a. *Instructor's Course Outline*

EM 879. *Diseases and Parasites of Poultry*

(C) (Barger and Card, 1943.) Prevention and control of diseases and parasites of domesticated birds.

EM 880. Turkey Management

(C) (Marsden and Martin, 1944.) Turkey classification, breeding, pedigreeing, incubation, brooding, rearing, feeding, and marketing; diagnosis of diseases and their prevention and control.

†**EM 880a. Instructor's Course Outline**

EM 883. Cotton

(C) (H. B. Brown, 1938.) The plant, production, marketing, products, and uses of cotton.

†**EM 883a. Instructor's Course Outline**

EM 884. Growing Tree and Small Fruits

(HS) (Knapp and Auchter, 1941.) Managing, growing, harvesting, storing, and marketing of tree and small fruits.

†**EM 884a. Instructor's Course Outline**

EM 885. The Vegetable Growing Business

(C) (R. A. and G. S. Watts, 1940.) Principles and practices, science, and art of growing and marketing vegetables. (T)

†**EM 885a. Instructor's Course Outline**

EM 886. Forestry in Farm Management

(C) (Westveld and Peck, 1941.) Value and usefulness of farm forests, methods of handling them, and the means of making them real farm assets.

†**EM 886a. Instructors' Course Outline**

EM 942. An Introduction to American Forestry

(C) (S. W. Allen, 1938.) Interrelationship of the art and science of forestry; the technical study of the business of forestry. (T)

†**EM 942a. Instructor's Course Outline**

BUSINESS

EM 703. Textbook of Office Management

(C) (Leffingwell and Robinson, 1943.) The office manager's task of getting the office work done well, quickly, and at a reasonable cost.

†**EM 703a. Instructor's Course Outline**

EM 706. Applied Secretarial Practice

(HS) (J. R. Gregg, 1941.) Business customs and procedures essential to a private secretary. (T)

†**EM 706a. Instructor's Course Outline**

***EM 707. Teacher's Manual for Applied Secretarial Practice**

EM 718. Pitman Shorthand Speed Drills and Keys.

(HS) (P. Moser, 1939.) A text designed to follow the basic course in Pitman

See footnotes on page 28.

shorthand for the purpose of developing dication skill.

†**EM 718a. Instructor's Course Outline**

EM 728. Essentials of Business Arithmetic

(HS) (Kanzer and Schaaf, 1943.) Fundamentals of arithmetic and their applications to business problems. (T)

†**EM 728a. Instructor's Course Outline**

***EM 729. Essentials of Business Arithmetic—Instructor's Manual**

(To be used with EM 728.)

EM 730. Fundamentals of Advertising

(HS) (Rowse and Fish, 1943.) Problems of advertising; advertising media; copy writing. (T)

****Workbook for Fundamentals of Advertising**

†**EM 730a. Instructor's Course Outline**

***EM 732. Instructor's Manual for Fundamentals of Advertising**

(To be used with EM 730.)

EM 740. Real Estate Selling and Leasing

(C) (N. L. North, 1938.) The successful leasing and selling of the various classes of property. (T)

†**EM 740a. Instructor's Course Outline**

EM 746. Business Filing

(HS) (Bassett and Agnew, 1943.) Basic principles of alphabetical, numerical, geographical, and subject filing, including Army and Navy filing. (T)

†**EM 746a. Instructor's Course Outline**

***EM 747. Instructor's Manual for Business Filing**

(To be used with EM 746.)

EM 748. A Practical Course in Successful Selling

(HS) (H. Simmons, 1939.) General principles of selling for the field salesman. (T)

†**EM 748a. Instructor's Course Outline**

EM 749. Modern Business English

(HS) (Davis, Lingham, and Stone, 1940.) Business letter writing and the improvement in the use of English in business. (T)

****Business English Workbook**

†**EM 749a. Instructor's Course Outline**

***EM 751. Teacher's Key to Accompany Modern Business English**

Teacher's Key to Accompany Business English Work book

(To be used with EM 749.)

EM 754. Principles of Business Law—Volumes 1 and 2

(C) (Dillavou and Howard, 1940.) Fundamental principles of business law and their applications to concrete cases. (T)

†EM 754a. *Instructor's Course Outline*

***EM 755. Instructor's Manual for Principles of Business Law**

EM 756. Our Modern Banking and Monetary System—Volumes 1 and 2

(C) (R. G. Thomas, 1942.) Nature and operation of our money and banking systems; theories of money and prices. (T)

†EM 756a. *Instructor's Course Outline*

EM 758. Life Insurance

(C) (J. B. MacLean, 1939.) Types of life insurance and policy terms; mortality table; premium rates, reserve; dividends; risk selection; assets; organization, regulation, and taxation of life insurance companies. (T)

†EM 758a. *Instructor's Course Outline*

EM 759. Insurance

(C) (A. H. Mowbray, 1937.) Risk; the insurance contract; types of insurance carriers; problems of the insurance carrier; state supervision of private insurance; insurance in state policy. (T)

†EM 759a. *Instructor's Course Outline*

EM 764. Auditing Theory and Procedure

(C) (Sherwood and Culey, 1940.) A well-balanced presentation of both the theory and procedure of auditing, assuming a thorough knowledge of the principles of accounting.

****Workbook for Auditing Theory and Procedure**

†EM 764a. *Instructor's Course Outline*

***EM 765. Teacher's Manual for Auditing Theory and Procedure**

(To be used with EM 764.)

EM 767. Accounting Principles—Volume 1

(C) (McKinsey and Noble, 1944.) Introductory principles of accounting; preparation of statements; accounting books and records; bookkeeping procedure for selling organizations; partnerships. (T)

****Working Papers for Accounting Principles—Volume 1**

†EM 767a. *Instructor's Course Outline*

EM 768. Accounting Principles—Volume 2

(C) (McKinsey and Noble, 1944.) A continuation of EM 767. Corporation accounting; special types of accounting

procedures; applications of accounting principles in the management of business. (T)

****Working Papers for Accounting Principles—Volume 2**

†EM 768a. *Instructor's Course Outline*

***EM 769. Manual and Solutions for Accounting Principles—Volumes 1 and 2**

(To be used with EM 767 and EM 768.)

***EM 770. Accounting Tests to Accompany Accounting Principles—Volume 1**

(To be used with EM 767.)

***EM 771. Accounting Tests to Accompany Accounting Principles—Volume 2**

(To be used with EM 768.)

EM 772. Cost Accounting Principles and Practice—Volume 1

(C) (J. J. W. Neuner, 1942.) Survey of the basic principles of cost accounting. (T.)

****Practice Set No. 1 to Accompany Cost Accounting—Volume 1**

EM 773. Cost Accounting Principles and Practice—Volume 2

(C) (J. J. W. Neuner, 1942.) A continuation of EM 772. Specialized and advanced cost accounting. (T)

****Practice Set No. 2 to Accompany Cost Accounting—Volume 2**

†EM 772-773a. *Instructor's Course Outline*

***EM 774. Solutions Manual for Cost Accounting—Volumes 1 and 2**

(To be used with EM 772 and EM 773.)

***EM 775. Objective Tests for Cost Accounting—Volume 1**

(To be used with EM 772.)

***EM 776. Objective Tests for Cost Accounting—Volume 2**

(To be used with EM 773.)

EM 777. Office Machines Course

(HS) (P. L. Agnew, 1942.) Instruction in the use of full keyboard and ten-key adding listing machines, crank-driven and key-driven calculators.

***EM 778. Manual for Office Machines Course**

(To be used with EM 777.)

†EM 777-778a. *Instructor's Course Outline*

See footnotes on page 28.

EM 781. Credits and Collections

(C) (Ettinger and Golieb, 1933.) Correct principles and practice of credit management with special attention to mercantile credit.

†EM 781a. *Instructor's Course Outline*

EM 783. Personnel Management and Industrial Relations—Volumes 1 and 2

(C) (Yoder, 1942.) Employee-employer relations and the managerial aspect of industrial relations. (T)

†EM 783a. *Instructor's Course Outline*

EM 784. Wholesaling Principles and Practice

(C) (Beckman and Engle, 1937.) A scientific treatment and analysis of wholesaling; nature and evolution of wholesaling; modern wholesaling systems; operation and management of a wholesale business; special economic aspects and trends of wholesaling.

†EM 784a. *Instructor's Course Outline*

EM 785. Merchandising Techniques

(C) (Hogadone and Beckley, 1942.) Retail merchandising theory and practical application.

†EM 785a. *Instructor's Course Outline*

EM 786. Retailing: Principles and Practices

(HS) (G. Richert, 1938.) Retailing principles and practices of buying, advertising, selling, and store management.

†EM 786a. *Instructor's Course Outline*

*EM 787. *Teacher's Handbook for Retailing: Principles and Practices*

(To be used with EM 786.)

*EM 788. *Tests for Retailing: Principles and Practices*

(To be used with EM 786.)

EM 789. Fundamentals of Selling

(HS) (Walters and Wingate, 1942.) Functions of sellers; basic knowledge needed in selling; the seller; sales transaction; special mediums for selling; selling policies; selling oneself. (T)

**Workbook for Use With Fundamentals of Selling

†EM 789a. *Instructor's Course Outline*

*EM 790. *Teacher's Manual for Fundamentals of Selling*

(To be used with EM 789.)

EM 797. Business Economic Problems

(HS) (Shields and Wilson, 1940.) Money and credit; wealth; politics; taxes; marketing; labor; agriculture.

See footnotes on page 28.

**Workbook for Business Economic Problems

†EM 797a. *Instructor's Course Outline*

*EM 798. *Instructor's Manual for Business Economic Problems*

(To be used with EM 797.)

*EM 799. *Achievement Tests for Business Economic Problems*

(To be used with EM 797.)

ECONOMICS AND SOCIOLOGY

EM 221. American Economic Problems

(HS) (Patterson, Little and Burch, 1941.) Production; business and financial organizations; consumption and distribution; labor policies; agricultural programs; programs of economic reorganization. (T)

†EM 221a. *Instructor's Course Outline*

EM 222. Economic Geography

(HS) (Colby and Foster, 1940.) Man's use of his economic environment in making a living; basic resources and major industries of the leading nations of the world. (T)

**Investigations in Industries and Resources to Accompany Economic Geography

(Workbook.)

†EM 222a. *Instructor's Course Outline*

*EM 224. *Key to Investigations in Industries and Resources*

(For use with EM 222.)

EM 226. General Anthropology

(C) (Edited by Franz Boas, 1938.) History of mankind; human origins; differentiation of race; development of language; discoveries and inventions; means of subsistence; economic organization of primitive peoples; social life; government; culture; religion; methods of research. (T)

†EM 226a. *Instructor's Course Outline*

EM 230. Economic Geography

(C) (Jones and Darkenwald, 1941.) A study of the production and distribution of the chief commercial products of the world. (T)

†EM 230a. *Instructor's Course Outline*

EM 260. Sociology—Volumes 1 and 2

(C) (Ogburn and Nimkoff, 1940.) Social life as explained by the interaction of heredity, natural and cultural environment, personality, collective behavior, communities, social institutions and changes. (T)

†EM 260a. *Instructor's Course Outline*

EM 266. Principles of Criminology

(C) (E. H. Sutherland, 1939.) The fundamentals of criminology using the theory of criminal behavior as the point of departure. (T)

†**EM 266a. Instructor's Course Outline**

EM 268. A Study of Rural Society

(C) (Kolb and Brunner, 1940.) Organization and changes of rural society from the point of view of important backgrounds, recent developments, and trends. (T)

†**EM 268a. Instructor's Course Outline**

EM 295. Labor Problems in American Industry—Volumes 1 and 2

(C) (C. R. Daugherty, 1941.) Psychological, social, economic, historical, and political factors in industrial relations; labor disharmony. (T)

†**EM 295a. Instructor's Course Outline**

EM 763. Economics, Principles and Problems—Volumes 1 and 2

(C) (Gemmell and Blodgett, 1942.) Production, price, determination, income distribution, labor, and standards of living; medium of exchange; government; economic life. (T)

†**EM 763a. Instructor's Course Outline**

EDUCATION, PSYCHOLOGY, AND PHILOSOPHY

EM 426. Psychology and Life

(HS) (F. L. Ruch, 1941.) A study of the thoughts, feelings, and actions of people; physiological backgrounds. (T)

†**EM 426a. Instructor's Course Outline**

EM 478. Principles of Abnormal Psychology

(C) (E. S. Conklin, 1944.) Introduction to certain special fields of psychological investigation. (A knowledge of general psychology is presupposed.) (T)

†**EM 478a. Instructor's Course Outline**

EM 481. Principles of Applied Psychology

(C) (A. T. Poffenberger, 1942.) Generalizations in the field of applied psychology, illustrated with research data. (T)

†**EM 481a. Instructor's Course Outline**

EM 487. Psychology of Adjustment

(C) (L. F. Shaffer, 1936.) A study of the problems of human adjustment from the standpoint of objective psychology. (T)

†**EM 487a. Instructor's Course Outline**

***EM 488. Objective Tests for the Psychology of Adjustment**

(To be used with EM 487.)

EM 490. Industrial Psychology

(C) (J. Tiffin, 1942.) Application of psychology to employee selection and placement; reduction of accidents; solution of visual problems; improvement of merit rating and training methods; the measurement and improvement of employee morale. (T)

†**EM 490a. Instructor's Course Outline**

EM 615. An Introduction to Modern Philosophy

(C) (A. Castell, 1943.) Readings and comments on philosophical problems in theology, metaphysics, epistemology, ethics, political theory, philosophy of history.

†**EM 615a. Instructor's Course Outline**

EM 618. Human Nature and Conduct

(C) (J. Dewey, 1944.) A discussion of the place of habit, impulse, and intelligence in conduct. (T)

†**EM 618a. Instructor's Course Outline**

EM 621. An Introduction to Logic and Scientific Method

(C) (Cohen and Nagel, 1934.) Propositions; forms of inference; scientific method; probability; fallacies. (T)

†**EM 621a. Instructor's Course Outline**

EM 761. Psychology Applied to Life and Work—Volumes 1 and 2

(C) (H. W. Heppner, 1941.) Methods of interpreting and influencing the behavior of friends, business associates, and employees.

†**EM 761a. Instructor's Course Outline**

***EM 762. Instructor's Manual for Psychology Applied to Life and Work**

(To be used with EM 761.)

†**EM 762a. Instructor's Course Outline**

EM 913. Introduction to American Public Education

(C) (C. A. DeYoung, 1942.) An overview of all education in which the American public invests its time, money, or both. (T)

EM 917. Educational Psychology—Volumes 1 and 2

(C) (Gates, Jersild, McConnell, Challman, 1942.) A survey of the facts and principles of educational psychology most valuable to the teaching profession. (T)

†**EM 917a. Instructor's Course Outline**

See footnotes on page 28.

EM 921. Foundations of Modern Education

(C) (E. H. Wilds, 1942.) The evolution of educational theory from primitive man to the present time. (T)

†EM 921a. *Instructor's Course Outline*

EM 929. Fundamentals of Public School Administration—Volumes 1 and 2

(C) (Ward G. Reeder, 1941.) Administration of instruction and pupil personnel; the school plant; school business affairs; instructional materials. (T)

†EM 929a. *Instructor's Course Outline*

EM 932. Progressive Methods of Teaching in Secondary Schools—Volumes 1 and 2

(C) (N. L. Bossing, 1942.) Techniques of classroom instruction and their effectiveness in attaining the aims of education. (T)

†EM 932a. *Instructor's Course Outline*

EM 935. Modern Secondary Education—Volumes 1 and 2

(C) (A. A. Douglass, 1938.) Purposes of the American secondary school and the evaluation of ways and means by which these purposes are accomplished. (T)

†EM 935a. *Instructor's Course Outline*

EM 939. Measurement and Evaluation in the Secondary School

(C) (Greene, Jorgensen, and Gerberich, 1943.) The effective use of measurement and evaluation instruments in improving the results of teaching. (T)

†EM 939a. *Instructor's Course Outline*

ENGLISH AND JOURNALISM

EM 104. Writer's Guide and Index to English

(C) (P. G. Perrin, 1944.) A description of current American usage and style.

†EM 104a. *Instructor's Course Outline*

***EM105. Answer Key for Writer's Guide and Index to English**

(To be used with EM 104.)

EM 109. From Beowulf to Thomas Hardy—Volumes 1, 2, 3, and 4

(C) (R. Shafer, 1939 and 1940.) Introductory course in the general history of English literature.

†EM 109a. *Instructor's Course Outline*

EM 114. American Life in Literature—Volumes 1, 2, 3, and 4

(C) (Edited by J. B. Hubbell, 1936.) A study of American literature and the

relationship between the literature and life of America.

†EM 114a. *Instructor's Course Outline*

EM 125. Principles and Types of Speech

(C) (A. H. Monroe, 1944.) An exposition of principles of speech-making, together with specimens which show their practical applications. (T)

†EM 125a. *Instructor's Course Outline*

EM 130. Shakespeare

(C) (Edited by T. M. Parrott, 1938.) The life of Shakespeare; twenty-three of his plays, the sonnets.

†EM 130a. *Instructor's Course Outline*

EM 131. Modern American and British Poetry—Volumes 1 and 2

(C) (L. Untermeyer, 1942.) A selection of American and British poetry with brief biographies of the authors.

†EM 131a. *Instructor's Course Outline*

EM 907. Modern News Reporting

(HS) (C. Warren, 1934.) Work of the newspaper reporter. (T)

†EM 907a. *Instructor's Course Outline*

HISTORY AND GOVERNMENT

EM 219. World History—Volumes I and II

(HS) (Boak, Slosson, and Anderson, 1942.) History of civilization from a world point of view. (T)

†*EM 219a. *Instructor's Course Outline*

EM 238. Political and Cultural History of Modern Europe—Volumes I-IV

(C) (Carlton J. H. Hayes, 1939-1944.) The forming of modern Europe; revolutionary developments of the modern world; liberal, romantic, democratic, and realist Europe; an embattled and nationalist world since 1910. (1830 to the present.) (T)

****Map Supplement**

†EM 238a. *Instructor's Course Outline*

EM 240. Medieval History.

(C) (C. Stephenson, 1943.) History of Europe from Roman times to the opening of the sixteenth century. (T)

†EM 240a. *Instructor's Course Outline*

EM 242. A Survey of Ancient History

(C) (M. L. W. Laistner, 1929.) An introductory course covering the period from the Stone Age to the death of Constantine. (T)

†EM 242a. *Instructor's Course Outline*

See footnotes on page 28.

EM 244. *The People and Politics of Latin America—Volumes 1 and 2*

(C) (M. W. Williams, 1938.) A history of the Latin-American people with emphasis upon constructive developments and arts of peace rather than on quarrels and wars. (T)

†EM 244a. *Instructor's Course Outline*

EM 246. *Civilization Past and Present—Volumes 1 and 2*

(C) (Wallbank and Taylor, 1944.) A survey of European cultures, with integrated discussions of the civilizations of the U. S. and most other countries of the world. (T)

†EM 246a. *Instructor's Course Outline*

EM 248. *A History of Russia*

(C) (B. Pares, 1937.) History of the Russian people from prehistoric times to the present. (T)

†EM 248a. *Instructor's Course Outline*

EM 250. *A History of the Far East in Modern Times*

(C) (Harold M. Vinacke, 1941.) History of China, Japan, and Korea in modern times. (T)

†EM 250a. *Instructor's Course Outline*

EM 252. *Essentials of American Government*

(C) (Ogg and Ray, 1943.) Foundations of national, state, and local governments in the United States. (T)

†EM 252a. *Instructor's Course Outline*

EM 254. *Governments of Continental Europe—Volumes 1 and 2*

(C) (Shotwell, Gooch, Loewenstein, Zurcher, Florinsky, Herlitz, and Wuorinen, 1940.) Functions and characteristics of governments in Europe. (T)

†EM 254a. *Instructor's Course Outline*

EM 270. *American Political and Social History—Volumes 1 and 2*

(C) (H. U. Faulkner, 1943.) Political and social history of America from colonial civilization to 1943.

†EM 270a. *Instructor's Course Outline*

LITERACY TRAINING

Em 160. *Meet Private Pete, A Soldier's Reader*

A story and pictures to teach men to read.

****EM 161. *Learning to Read***

A practice book to be used with EM 160.

See footnotes on page 28.

EM 162. *Instructor's Guide and Lesson Plans for Literacy Training

(A set of 80 flash cards accompanies each instructor's manual.)

EM 163. *Arithmetic for Everyday Life*

(Text and Workbook in one volume.) The most elementary principles of arithmetic for the beginner.

MATHEMATICS

EM 315. *College Algebra*

(C) (W. L. Hart, 1938.) Mathematical induction; theory of equations; logarithms; mathematics of investment; probability; determinants; partial fractions; infinite series. (T)

†EM 315a. *Instructor's Course Outline*

†EM 315b. *Instructor's Course Outline*

EM 318. *Plane and Spherical Trigonometry with Tables*

(C) (Kells, Kern, and Bland, 1940.) Trigonometric functions, their relations and definitions; solutions of right and oblique triangles in a plane and on a sphere; logarithms and the slide rule. (T)

†EM 318a. *Instructor's Course Outline*

EM 321. *Elements of Analytic Geometry*

(C) (C. E. Love, 1940.) Cartesian and polar coordinates; the straight line, conic sections, and algebraic curves; tangents and normals; parametric equations; coordinates in space and surfaces. (T)

†EM 321a. *Instructor's Course Outline*

EM 324. *Elements of the Differential and Integral Calculus*

(C) (Granville, Smith, and Longley, 1941.) Rules for differentiation and integration; applications of differential and integral calculus in the field of engineering. (T)

†EM 324a. *Instructor's Course Outline*

EM 325. *Answers to those Problems not Answered in Elements of Differential and Integral Calculus

(To be used with EM 324.)

EM 327. *An Introduction to Statistical Analysis*

(C) (C. H. Richardson, 1944.) Instruction in the collection, organization, analysis, and interpretation of masses of numerical facts. (T)

†EM 327a. *Instructor's Course Outline*

EM 333. *The Mathematics of Investment*

(C) (W. L. Hart, 1929.) An elementary course in the theory and application of annuities certain, and the mathematical aspects of life insurance. (T)

†EM 333a. *Instructor's Course Outline*

EM 906. *A Course in the Slide Rule and Logarithms*

(HS) (E. J. Hills, 1943.) Information on how to use the scales on standard slide rules and how to use tables of logarithms. (T).

†EM 906a. *Instructor's Course Outline*

EM 970. *Mathematics for Technical and Vocational Schools*

(HS) (Slade and Margolis, 1936.) Methods of solution of mathematical problems occurring in technical and trade work. (T)

†EM 970a. *Instructor's Course Outline*

EM 971. *Machine Shop Mathematics*

(HS) (A. Axelrod, 1942.) The use of fundamental mathematical facts and procedures in the machine trade industry.

†EM 971a. *Instructor's Course Outline*

EM 972. *Mathematics Essential to Electricity and Radio*

(HS) (Cooke and Orleans, 1943.) The principles of algebra and trigonometry necessary in and applied to electricity and radio.

†EM 972a. *Instructor's Course Outline*

EM 973. *Carpentry Mathematics*

(HS) (Wilson and Rogers, 1930.) Practical application of mathematics to the carpentry trade.

†EM 973a. *Instructor's Course Outline*

MUSIC AND ART

EM 601. *Harmony*

(C) (W. Piston, 1944.) The harmonic common practices of composers of the eighteenth and nineteenth centuries. (T)

†EM 601a. *Instructor's Course Outline*

EM 602. *A History of Music*

(C) (T. M. Finney, 1935.) Chronological growth and development of music from ancient times to the present. (T)

†EM 602a. *Instructor's Course Outline*

EM 603. *Discovering Music*

(C) (McKinney and Anderson, 1943.) A discussion of music from the listener's standpoint with illustrations from the works of various composers. (T)

†EM 603a. *Instructor's Course Outline*

EM 610. *Art Through the Ages—Volumes 1 and 2*

(C) (H. Gardner, 1936.) Development of architecture, painting, sculpture, and related arts. (T)

See footnotes on page 28.

†EM 610a. *Instructor's Course Outline*

EM 959. *Commercial Art*

(HS) (C. E. Wallace, 1939.) Drawing, design, and lettering applied to commercial art.

†EM 959a. *Instructor's Course Outline*

SCIENCE AND ENGINEERING

EM 228. *Elements of Geography—Volumes 1 and 2*

(C) (Finch and Trewartha, 1944.) The major elements of physical and cultural geography. (T)

†EM 228a. *Instructor's Course Outline*

EM 234. *The Earth and the State*

(C) (D. Whittlesey, 1943.) The differentiation of political phenomena from place to place over the earth. (T)

†EM 234a. *Instructor's Course Outline*

EM 286. *Elements of Healthful Living*

(C) (H. S. Diehl, 1942.) Personal and community health and health problems. (T)

†EM 286a. *Instructor's Course Outline*

EM 427. *Elementary Meteorology*

(HS) (Finch, Trewartha, Shearer, and Caudle, 1943.) The earth and its planetary relations; temperature; winds; storms; climates; weather applications to aviation. (T)

†EM 427a. *Instructor's Course Outline*

EM 428. *Exploring Biology*

(HS) (E. T. Smith, 1943.) Introduction to the field of biology, with emphasis on man and his relations to the world around him. (T)

†EM 428a. *Instructor's Course Outline*

EM 429. *Teacher's Key to Tests and Conclusions for Exploring Biology
(To be used with EM 428.)

EM 431. *The Physical Sciences*

(HS) (Eby, Waugh, Welch, and Buckingham, 1943.) An introduction to astronomy, geology, meteorology, physics, and chemistry. (T)

†EM 431a. *Instructor's Course Outline*

EM 432. *Teacher's Manual and Key for the Physical Sciences

(To be used with EM 431.)

EM 329. *Astronomy*

(C) (Robert H. Baker, 1938.) An introduction to astronomy including the most recent discoveries and viewpoints; motions of the earth; the moon; the solar system; planets; the sun; stars and stellar motions; nebulae. (T)

†EM 439a. *Instructor's Course Outline*

EM 442. *Foundations of Biology—Volumes 1 and 2*

(C) (L. L. Woodruff, 1941.) The fundamental principles of biology illustrated by the discussion of the structure and physiology of representative animals and plants. (T)

†EM 442a. *Instructor's Course Outline*

EM 445. *A Textbook of General Botany*

(C) (Holman and Robbins, 1939.) Survey of the field of botany, relating the subjects wherever possible to agricultural practices and problems. (T)

†EM 445a. *Instructor's Course Outline*

EM 448. *Animal Biology—Volumes 1 and 2*

(C) (M. F. Guyer, 1941.) The basic principles of biology based on a survey of animal types with frequent application to human structures, functions, and problems. (T)

†EM 448a. *Instructor's Course Outline*

EM 451. *Introductory College Chemistry*

(C) (H. N. Holmes, 1939.) Basic principles of chemistry; the atomic theory; composition and changes in composition of chemical substances, their properties and energy relations. (T)

†EM 451a. *Instructor's Course Outline*

EM 454. *The Chemistry of Organic Compounds*

(C) (J. B. Conant, 1939.) Fundamental principles of organic chemistry; methods of determining structure; methods of synthesis; the many synthetic coal tar products. (T)

†EM 454a. *Instructor's Course Outline*

EM 457. *Elementary Quantitative Analysis*

(C) (Willard and Furman, 1940.) Theory and practice of the detection and quantitative estimation of substances present in compounds and mixtures. (T)

EM 460. *Outlines of Physical Chemistry*

(C) (Getman and Daniels, 1943.) Understanding and use of the laws of chemistry and physics.

†EM 460a. *Instructor's Course Outline*

EM 463. *Outlines of History Geology*

(C) (Schuchert and Dunbar, 1941.) General survey of the history of the earth. (T)

†EM 463a. *Instructor's Course Outline*

EM 464. *Outlines of Physical Geology*

(C) (Longwell, Knopf, and Flint, 1941.) The geological processes as agents

of change and the historical nature of all geology. (T)

†EM 464a. *Instructor's Course Outline*

EM 466. *Physics—Volumes 1 and 2*

(C) (Hausmann, and Slack, 1939.) Mechanics; heat; electricity; magnetism; sound; light. (T)

†EM 466a. *Instructor's Course Outline*

EM 469. *Electricity and Magnetism*

(C) (N. Gilbert, 1941.) Fundamental principles of electricity and magnetism; applications in the field of engineering. (T)

†EM 469a. *Instructor's Course Outline*

EM 472. *The Machinery of the Body*

(C) (Carlson and Johnson, 1941.) The various parts of the body and their functions.

†EM 472a. *Instructor's Course Outline*

EM 491. *Fundamentals of Physical Science*

(C) (Konrad B. Krauskopf, 1941.) Survey of the fields of astronomy, physics, chemistry, and geology; the scientific method; the relationship of science to modern life and thought. (T)

†EM 491a. *Instructor's Course Outline*

EM 495. *The Human Organism and the World of Life*

(C) (Young, Stebbins, and Hylander, 1938.) A broad view of scientific knowledge concerning the processes of life. (T)

†EM 495a. *Instructor's Course Outline*

EM 908. *Surveying*

(HS) (C. Breed, 1944.) The theory and technique of surveying; directions for improvising instruments with which the principles of surveying can be practiced. (T)

†EM 908a. *Instructor's Course Outline*

EM 909. *Elementary Photography*

(HS) (G. G. Quarles, 1940.) Fundamentals of photography; qualities in lenses, cameras, and shutters of various types. (T)

†EM 909a. *Instructor's Course Outline*

EM 912. *Blueprint Reading at Work*

(HS) (Rogers and Welton, 1944.) A combination textbook and workbook with practical problems of industry; training in the intelligent reading of blueprints. (T)

†EM 912a. *Instructor's Course Outline*

EM 960. *Mechanical Drawing*

(HS) (French and Svensen, 1940.) The essentials of mechanical drawing; modern commercial practice in making working drawings. (T)

See footnotes on page 28.

†EM 960a. *Instructor's Course Outline*

EM 961. Engineering Drawing

(C) (T. E. French, 1941.) Basic principles of engineering drawing; architectural and map drawing.

†EM 961a. *Instructor's Course Outline*

TRADES

EM 957. Better Foremanship

(HS) (G. Gardiner, 1941.) Answers to the many practical questions and problems arising from a foreman's responsibility for instructing, training, and directing his men.

†EM 957a. *Instructor's Course Outline*

EM 958. Foremanship and Supervision

(HS) (F. Cushman, 1938.) Principal types of educational procedure applied to the improvement of foremanship.

†EM 958a. *Instructor's Course Outline*

EM 962. Principles and Practice of Radio Servicing

(HS) (H. J. Hicks, 1943.) Fundamental principles and their application to the various components of radio receivers.

†EM 962a. *Instructor's Course Outline*

EM 965. Machine Tool Operation—Part I

(HS) (H. D. Burghardt, 1941.) Mechanical principles applied in the construction of certain machines and tools, and in various machine operations such as the lathe, bench, and forge.

EM 966. Machine Tool Operation—Part II

(H. D. Burghardt, 1937.) Construction and operation of drilling machine, shaper, planer, milling machine, and grinding machine.

†EM 965-966a. *Instructor's Course Outline*

EM 967. Industrial Electricity

(HS) (Nadon and Gelmine, 1939.) The essentials of electricity and methods of connecting, operating, and applying electrical machines and controls.

†EM 967a. *Instructor's Course Outline*

EM 968. Carpentry

(HS) (Griffith and Cox, 1935.) The essentials of carpentry, including foundations, roof frames of various shapes, exterior covering and finish, interior finish, and methods of estimating.

†EM 968a. *Instructor's Course Outline*

EM 975. Electric Wiring

(HS) (A. A. Schuhler, 1943.) The various branches of electrical wiring, excluding electrical construction.

†EM 975a. *Instructor's Course Outline*

EM 976. How to Design and Install Plumbing

(C) (A. J. Matthias, Jr., 1941.) Important facts about plumbing and plumbing problems.

†EM 976a. *Instructor's Course Outline*

EM 977. Modern Electric and Gas Refrigeration

(C) (Althouse and Turnquist, 1943.) Domestic and commercial applications of modern refrigeration.

†EM 977a. *Instructor's Course Outline*

EM 978. Air-Conditioning, Heating, and Ventilating

(C) (Dalzell and Hubbard, 1938.) The theory of air-conditioning; different methods employed for designing, applying, and installing systems and apparatus.

†EM 978a. *Instructor's Course Outline*

MISCELLANEOUS

EM 560. Latin Fundamentals

(C) (Hettich and Maitland, 1934.) A beginning course in Latin, using the direct approach to Latin syntax. (T)

EM 945. Your Post-War Career

(Not available for individual enrollment.)

(C) An introduction to the postwar job scene.

†EM 945a. *Instructor's Course Outline*

See footnotes on page 28.

B. Language and Radio Code Materials for Group Instruction:

1. Basic Courses, Languages (EM 500 series). A basic language course consists of twenty-four double-faced 12-inch recordings, with accompanying manuals, designed for group instruction. Individuals may, however, secure basic language manuals, without accompanying records, if the application states that the services of a native speaker are available.

LIST OF BASIC LANGUAGE MATERIALS

EM 500. Spoken French, Basic Course—
Units 1-12

Direct method of learning to speak French, for those who know no French.

*** EM 501. Spoken French, Basic Course—**
Units 13-30

A continuation of EM 500, with situations a bit more complex.

*** EM 502. Manuel Du Guide**
(For use with EM 500 and EM 501.)

EM 503. Spoken Italian, Basic Course—
Units 1-12

Direct method of learning to speak Italian, for those who know no Italian.

EM 504. Spoken Italian, Basic Course—
Units 13-30

A continuation of EM 503, with more complex and less frequently encountered situations.

*** EM 505. Istruzioni Per La Guida**
(For use with EM 503 and 504.)

EM 506. Spoken Chinese, Basic Course—
Units 1-12

Direct method instruction in the speaking of the Chinese language, specifically North Chinese.

EM 507. Spoken Chinese, Basic Course—
Units 13-30

Continuation of EM 506.

EM 524. Spoken Russian, Basic Course—
Units 1-12

An introduction to spoken Russian containing all the necessary grammatical materials for learning to speak everyday Russian.

EM 529. Spoken Dutch, Basic Course—
Units 1-12

Direct method of learning to speak Dutch, for those who know no Dutch.

EM 530. Spoken Dutch, Basic Course—
Units 13-30

A continuation of EM 529.

EM 531. Handleiding voor de Gids Guide's
Manual for Spoken Dutch,
Units 1-30

(EM 529 and EM 530.)

EM 532. Spoken Norwegian, Basic
Course—Units 1-12

A general introduction to the Norwegian language.

EM 541. Spoken Burmese, Basic Course—
Units 1-12

An introduction to spoken Burmese containing all the essential materials for learning to speak everyday Burmese.

EM 544. Spoken Hindustani, Basic
Course—Units 1-12

An introduction to spoken Hindustani containing all the essential grammatical materials for learning to speak everyday Hindustani.

EM 550. Colloquial Dutch Basic Spoken
Dutch With Additional Col-
loquialisms

EM 509. Spoken Spanish, Basic Course—
Units 1-12

Direct method instruction in speaking Spanish.

EM 512. Spoken Portuguese, Basic
Course—Units 1-12

Direct method instruction in speaking Portuguese.

EM 515. Spoken Turkish, Basic Course—
Units 1-12

A basic study of everyday Turkish.

EM 518. Spoken German, Basic Course—
Units 1-12

Direct method instruction in speaking German.

EM 519. Spoken German, Basic Course—
Units 13-30

A continuation of EM 518

† Replaces pages 97-99, USAFI Catalog, Second Edition.

* Guide for the native speaker. A copy will be furnished with individual enrollments.

**EM 521. Spoken Hungarian, Basic Course—
Units 1-12**

An introduction to spoken Hungarian containing all the essential grammatical materials for learning to speak everyday Hungarian.

**EM 561. Spoken Japanese, Basic Course—
Units 1-12**

An introduction to spoken Japanese.

**EM 567. Spoken Malay, Basic Course—
Units 1-12**

An introduction to spoken Malay.

**EM 573. Spoken Serbo-Croatian, Basic
Course—Units 1-12**

A general introduction to the Serbo-Croatian language spoken by the people of Yugoslavia.

Army organizations may requisition (WD AGO Form 445) Basic Course Language Manuals and records through military channels from USAFI. Organization commanders requisitioning these materials must indicate the number of men in the group, and the circumstances which make the course desirable.

Navy organization not supplied by an Educational Services Officer may obtain these materials by official request from the Commanding Officer to the Educational Services Section, Training, Bureau of Naval Personnel, Washington 25, D. C. This request should contain names of at least twenty (20) prospective students (fifteen (15) overseas or aboard ship), together with the name of the officer who will accept custody of the phonograph records.

Marine Corps organizations attached to the Fleet Marine Force, Pacific, desiring Basic language materials will submit requisitions to Headquarters, Fleet Marine Force, Pacific. All other Marine Corps organizations will submit requisitions to Headquarters, Marine Corps via channels.

2. *Basic Radio Code Kit.* The basic radio code kit is for group instruction only. It may be requisitioned by Army Organizations in the same manner as the basic course language materials (see par. 1). No kits are available to Navy personnel.

C. GI Roundtable Manuals¹

GI Roundtable manuals are intended for two uses: (1) for reference by officers or enlisted personnel who conduct off-duty discussions, and (2) for general reading by military personnel of all ranks. In order that these manuals may receive the widest possible use, copies may be placed in War Information Centers, post libraries, service club reading rooms, company day rooms, hospital wards or other military information or recreation centers for reading by military personnel.

Introductory copies of each manual are automatically supplied to information-education officers in the United States. Army organizations may requisition additional copies from USAFI for the purpose and in the quantities authorized in paragraph 3c, section IV, Circular No. 311, War Department, 1944 and in paragraph 2, section IV, Circular No. 59, War Department, 1945.

Navy organizations may obtain GI Roundtable Manuals from the local Educational Services Officer or from the Educational Services Section, Standards and Curriculum Division, Training, Bureau of Personnel, Washington, D. C.

¹ Listing of GI Roundtable Manuals was not made in USAFI Catalog, Second Edition, or Information Bulletin Number 1.

Marine Corps organizations attached to the Fleet Marine Force Pacific, desiring GI Roundtable Manuals will submit requisitions Headquarters, Fleet Marine Force, Pacific. All other Marine Corps organizations will submit requisitions to Headquarters, Marine Corps via channels.

GI ROUNDTABLE MANUALS

EM No.	Title
1	Guide for Discussion Leaders.
2	What is Propaganda?
10	What Shall Be Done About Germany After the War?
11	What Shall Be Done With the War Criminals?
12	Can We Prevent Future Wars?
13	How Shall Lend-Lease Accounts Be Settled?
14	Is the Good Neighbor Policy a Success?
15	What Shall Be Done About Japan After Victory?
20	What Has Alaska To Offer Postwar Pioneers?
22	Will There Be Work For All?
23	Why Co-ops? What Are They? How Do They Work?
24	What Lies Ahead for the Philippines?
30	Can War Marriages Be Made To Work?
31	Do You Want Your Wife To Work After the War?
32	Shall I Build a House After the War?
33	What Will Your Town Be Like?
34	Shall I Go Back To School?
35	Shall I Take Up Farming?
36	Does It Pay To Borrow?
40	Will the French Republic Live Again?
41	Our British Ally.
42	Our Chinese Ally.
43	The Balkans—Many Peoples, Many Problems.
44	Australia: Our Neighbor "Down Under."
45	What Future for the Islands of the Pacific?
46	Our Russian Ally.
90	GI Radio Roundtable.

¹For distribution only within continental United States.

*High School and College Credit**

A. USAFI Form 47 (Revised Sep. 1944) (Application for Credit for Educational Achievement during Military Service)

Members of the Armed Forces on active duty interested in seeking credit at civilian schools for basic or recruit training, for courses completed at service schools, or for other educational experience while in the service, should secure and fill out completely USAFI Form 47 (Application for Credit for Educational Achievement). This application may be obtained from the Information-Education Officer, the Educational Services Officer, the Marine Corps Special Services Officer, or by writing to the Institute.

It is easier for military personnel while still on active duty to get an accurate, documented statement of their in-service training than it is for veterans to assemble such a record. The Information-Education officer should bring this fact to the attention of any who may in the future have need for such credit, and should help such persons to prepare USAFI Form No. 47. In particular, *every man who plans to resume his formal education part time or full time after his return to civilian life should be encouraged to submit USAFI Form No. 47 to the school of his choice.* In the case of those undergoing redeployment training this should be done as early as possible in the training period. New trainees are eligible for this service any time after completing basic training. A part of the credit application form may be returned to the applicant by the school with recommendations for further study. These recommendations will be extremely helpful to the individual who wishes to continue his civilian education while still in service.

USAFI Form 47 must be sent direct to the civilian school. The Institute does not grant or recommend credit for in-service training and experiences. Granting of credit is a function of the civilian educational institution.

Veterans of World War II no longer on active duty may apply for school or college credit by writing direct to the school or college of their choice, and by inclosing with their letter a certified copy of WD AGO Form 100 (Separation Qualification Record); or Notice of Separation from the U. S. Naval Service, NavPers 553; or Notice of Separation from the U. S. Naval Service—Coast Guard, 553; or U. S. M. C. Report of Separation, NAVMC 78-PD, or by requesting a transcript of in-service training from the Special Services Branch, Headquarters U. S. M. C., Washington 25, D. C. In the case of naval commissioned or warrant officers, the Officer's Qualification Record Jacket (NavPers 305), a certified copy thereof, or a statement from the Bureau of Naval Personnel covering the data desired should be submitted to the school, college, or employer.

*Replaces pages 19-21 USAFI Catalog, Second Edition.

B. USAFI Examinations

If you use USAFI Form 47 you may be asked to take the USAFI General Educational Development Examinations or one or more of the USAFI Subject Examinations. General Educational Development Examinations, on both the high school and college level, are designed to show your general level of educational achievement. Subject examinations measure your ability in a given subject or subject field.

You may not wish to apply for high school or college credit, but you may wish to take the General Educational Development and Subject Examinations for your own information. If so, make application to the Institute on USAFI Form 68, (Application for Institute Test or Examination).



