Social Sciences and History

Description of the Examination

The Social Sciences and History examination covers a wide range of topics from the social sciences and history disciplines. While the exam is based on no specific course, its content is drawn from introductory college courses that cover United States history, Western civilization, world history, government/political science, geography, sociology, economics, psychology, and anthropology.

The primary objective of the exam is to give candidates the opportunity to demonstrate that they possess the level of knowledge and understanding expected of college students who meet a distribution or general education requirement in the social sciences/history areas.

The Social Sciences and History examination contains approximately 120 questions to be answered in 90 minutes. Some of them are pretest questions that will not be scored. Any time candidates spend on tutorials and providing personal information is in addition to the actual testing time.

Note: This examination uses the chronological designations b.c.e. (before the common era) and c.e. (common era). These labels correspond to b.c. (before Christ) and a.d. (anno Domini), which are used in some textbooks.

Knowledge and Skills Required

The Social Sciences and History examination requires candidates to demonstrate one or more of the following abilities.

- Familiarity with terminology, facts, conventions, methodology, concepts, principles, generalizations, and theories
- Ability to understand, interpret, and analyze graphic, pictorial, and written material
- Ability to apply abstractions to particulars and to apply hypotheses, concepts, theories, and principles to given data

The content of the exam is drawn from the following disciplines. The percentages next to the main disciplines indicate the approximate percentage of exam questions on that topic.

**History**

Requires general knowledge and understanding of time- and place-specific human experiences. Topics covered include political, diplomatic, social, economic, intellectual, and cultural material.

United States History

Covers the colonial period, the American Revolution, the early republic, the Civil War and Reconstruction, industrialization, the Progressive Era, the First World War, the 1920s, the Great Depression and the New Deal, the Second World War, the 1950s, the Cold War, social conflict-the 1960s and 1970s, the late twentieth century

Western Civilization

40%

Covers ancient Western Asia, Egypt, Greece, and Rome as well as medieval Europe and modern Europe, including its expansion and outposts in other parts

15%
World History

8% Covers Africa, Asia, Australia, Europe, North America, and South America from prehistory to the present, including global themes and interactions

Government/Political Science, including

13% Comparative politics
   International relations
   Methods
   United States institutions
   Voting and political behavior

Geography, including

11% Cartographic methods
   Cultural geography
   Physical geography
   Population
   Regional geography
   Spatial interaction

Economics, including

10% Economic measurements
    International trade
    Major theorists and schools
    Monetary and fiscal policy
    Product markets
    Resource markets
    Scarcity, choice, and cost

Psychology, including

10% Aggression
    Biopsychology
    Conformity
    Group process
    Major theorists and schools
    Methods
    Performance
    Personality
    Socialization

Sociology, including

10% Demography
    Deviance
    Family
    Interaction
    Major theorists and schools
    Methods
    Social change
    Social organization
    Social stratification
Social theory

**Anthropology, including**

- Cultural anthropology
- Ethnography
  - Major theorists and schools
  - Methods
- Paleoanthropology

6%
Humanities

Description of the Examination

The Humanities examination tests general knowledge of literature, art, and music and the other performing arts. It is broad in its coverage, with questions on all periods from classical to contemporary and in many different fields: poetry, prose, philosophy, art, architecture, music, dance, theater, and film. The examination requires candidates to demonstrate their understanding of the humanities through recollection of specific information, comprehension and application of concepts, and analysis and interpretation of various works of art.

Because the exam is very broad in its coverage, it is unlikely that any one person will be well informed about all the fields it covers. The exam contains approximately 140 questions to be answered in 90 minutes. Some of these are pretest questions that will not be scored. Any time candidates spend on tutorials or providing personal information is in addition to the actual testing time.

For candidates with satisfactory scores on the Humanities examination, colleges may grant up to six semester hours (or the equivalent) of credit toward fulfillment of a distribution requirement. Some may grant credit for a particular course that matches the exam in content.

Note: This examination uses the chronological designations b.c.e. (before the common era) and c.e. (common era). These labels correspond to b.c. (before Christ) and a.d. (anno Domini), which are used in some textbooks.

Knowledge and Skills Required

Questions on the Humanities examination require candidates to demonstrate the abilities listed below, in the approximate percentages indicated. Some questions may require more than one of the abilities.

- Knowledge of factual information (authors, works, etc.) (50 percent of the examination)
- Recognition of techniques such as rhyme scheme, medium, and matters of style, and the ability to identify them as characteristics of certain writers, artists, schools, or periods (30 percent of the examination)
- Understanding and interpretation of literary passages and art reproductions that are likely to be unfamiliar to most candidates (20 percent of the examination). The subject matter of the Humanities examination is drawn from the following topics. The percentages next to the topics indicate the approximate percentages of exam questions on those topics.

The subject matter of the Humanities examination is drawn from the following topics. The percentages next to the topics indicate the approximate percent-ages of exam questions on those topics.

Literature

50%  
10% Drama  
10-15% Poetry  
15-20% Fiction  
10% Nonfiction (including philosophy)

The Arts

50%
20% Visual arts: painting, sculpture, etc.
5% Visual arts: architecture
15% Performing arts: music
10% Performing arts: film, dance, etc

The exam questions, drawn from the entire history of art and culture, are fairly evenly divided among the following periods: Classical, Medieval and Renaissance, seventeenth and eighteenth centuries, nineteenth century, and twentieth century. At least 5-10 percent of the questions draw on other cultures, such as African, Asian, and Latin American. Some of the questions cross disciplines and/or chronological periods, and a substantial number test knowledge of terminology, genre, and style.
Natural Sciences

Description of the Examination

The Natural Sciences examination covers a wide range of topics frequently taught in introductory courses surveying both biological and physical sciences at the freshman or sophomore level. Such courses generally satisfy distribution or general education requirements in science that usually are not required of nor taken by science majors. The Natural Sciences exam is not intended for those specializing in science; it is intended to test the understanding of scientific concepts that an adult with a liberal arts education should have. It does not stress the retention of factual details; rather, it emphasizes the knowledge and application of the basic principles and concepts of science, the comprehension of scientific information, and the understanding of issues of science in contemporary society.

The primary objective of the examination is to give candidates the opportunity to demonstrate a level of knowledge and understanding expected of college students meeting a distribution or general education requirement in the natural sciences. An institution may grant up to six semester hours (or the equivalent) of credit toward fulfillment of such a requirement for satisfactory scores on the examination. Some may grant specific course credit, on the basis of the total score for a two-semester survey course covering both biological and physical sciences.

The examination contains approximately 120 questions to be answered in 90 minutes. Some of these are pretest questions that will not be scored. Any time candidates spend on tutorials and providing personal information is in addition to the actual testing time.

Knowledge and Skills Required

The Natural Sciences examination requires candidates to demonstrate one or more of the following abilities in the approximate proportions indicated.

- Knowledge of fundamental facts, concepts, and principles (about 40 percent of the examination)
- Interpretation and comprehension of information (about 20 percent of the examination) presented in the form of graphs, diagrams, tables, equations, or verbal passages
- Qualitative and quantitative application of scientific principles (about 40 percent of the examination), including applications based on material presented in the form of graphs, diagrams, tables, equations, or verbal passages; more emphasis is given to qualitative than quantitative applications

The subject matter of the Natural Sciences examination is drawn from the following topics. The percentages next to the main topics indicate the approximate percentage of exam questions on that topic.

**Biological Science (50%)**

- 10%  Origin and evolution of life, classification of organisms
- 10%  Cell organization, cell division, chemical nature of the gene, bioenergetics, biosynthesis
- 20%  Structure, function, and development in organisms; patterns of heredity
10% Concepts of population biology with emphasis on ecology

Physical Science (50%)

7% Atomic and nuclear structure and properties, elementary particles, nuclear reactions
10% Chemical elements, compounds and reactions, molecular structure and bonding
12% Heat, thermodynamics, and states of matter; classical mechanics; relativity
4% Electricity and magnetism, waves, light, and sound
7% The universe: galaxies, stars, the solar system
10% The Earth: atmosphere, hydrosphere, structure features, geologic processes, and history

The examination includes some questions that are interdisciplinary and cannot be classified in one of the listed categories. Some of the questions cover topics that overlap with those listed previously, drawing on areas such as history and philosophy of science, scientific methods, science applications and technology, and the relationship of science to contemporary problems of society, such as environmental pollution and depletion of natural resources. Some questions are laboratory oriented.
College Mathematics

Description of the Examination

The College Mathematics examination covers material generally taught in a college course for nonmathematics majors and majors in fields not requiring knowledge of advanced mathematics.

The examination contains approximately 60 questions to be answered in 90 minutes. Some of these are pretest questions that will not be scored. Any time candidates spend on tutorials and providing personal information is in addition to the actual testing time.

The examination places little emphasis on arithmetic calculations, and it does not contain any questions that require the use of a calculator. However, an online scientific calculator (nongraphing) is available to candidates during the examination as part of the testing software.

It is assumed that candidates are familiar with currently taught mathematics vocabulary, symbols, and notation.

Knowledge and Skills Required

Questions on the College Mathematics examination require candidates to demonstrate the following abilities in the approximate proportions indicated.

- Solving routine, straightforward problems (about 50 percent of the examination)
- Solving nonroutine problems requiring an understanding of concepts and the application of skills and concepts (about 50 percent of the examination)

The subject matter of the College Mathematics examination is drawn from the following topics. The percentages next to the main topics indicate the approximate percentage of exam questions on that topic.

Sets

- Union and intersection
- Subsets, disjoint sets, equivalent sets
- Venn diagrams
- Cartesian product

Logic

- Truth tables
- Conjunctions, disjunctions, implications, and negations
- Conditional statements
- Necessary and sufficient conditions
- Converse, inverse, and contrapositive
- Hypotheses, conclusions, and counterexamples
Real Number System

- Prime and composite numbers
- Odd and even numbers
- Factors and divisibility
- Rational and irrational numbers
- Absolute value and order
- Open and closed intervals

Functions and Their Graphs

- Properties and graphs of functions
- Domain and range
- Composition of functions and inverse functions
- Simple transformations of functions: translations, reflections, symmetry

Probability and Statistics

- Counting problems, including permutations and combinations
- Computation of probabilities of simple and compound events
- Simple conditional probability
- Mean, median, mode, and range
- Concept of standard deviation
- Data interpretation and representation: tables, bar graphs, line graphs, circle graphs, pie charts, scatterplots, histograms

Additional Topics from Algebra and Geometry

- Complex numbers
- Logarithms and exponents
- Applications from algebra and geometry
- Perimeter and area of plane figures
- Properties of triangles, circles, and rectangles
- The Pythagorean theorem
- Parallel and perpendicular lines
- Algebraic equations, systems of linear equations, and inequalities
- Fundamental Theorem of Algebra, Remainder Theorem, Factor Theorem