

# ART

## *The Art of the Jazz Age*

- I. ART FUNDAMENTALS 20%
- A. Introduction to Art History
1. Methods and Inquiries of Art History
    - a. The Nature of Art Historical Inquiry
    - b. Sources, Documents, and the Work of Art Historians
    - c. The Development of Art History
  2. Brief Overview of Art in the Western World
    - a. Ancient Civilizations
    - b. Greek and Roman Art
    - c. Early Christian and Medieval Art
    - d. The Renaissance and Baroque
    - e. Rococo, Neoclassicism, and Romanticism
    - f. Realism and Impressionism
    - g. Post-Impressionism and Other Late Nineteenth-Century Developments
    - h. The Emergence of Modernism
    - i. Abstraction
    - j. Pop Art, Minimalism, and Photo Realism
    - k. Earthworks, Installations, and Performance
  3. Brief Overview of Non-Western Art
    - a. Asian Art
    - b. African and Oceanic Art
    - c. Islamic Art
    - d. The Americas
- B. Elements of Art
1. Formal Qualities of Art
    - a. Line
    - b. Shape and Form
    - c. Perspective
    - d. Color
    - e. Texture
    - f. Composition
  2. Processes and Techniques
    - a. Drawing
    - b. Printmaking
    - c. Painting
    - d. Photography
    - e. Sculpture
    - f. Mixed Media
    - g. Performance
    - h. Craft and Folk Art

i. Architecture

- II. ORIGINS OF AMERICAN MODERNISM 20%
- A. Introducing the “Jazz Age”
  - B. Overview of Art in America between 1900 and the End of World War I
    - 1. The Ashcan School
    - 2. The Armory Show of 1913
    - 3. New York Dada
    - 4. Alfred Stieglitz and 291 Gallery
  - C. Modernist Painting
    - 1. SELECTED WORK: CHARLES DEMUTH, *I SAW THE FIGURE 5 IN GOLD*, 1928
    - 2. SELECTED WORK: GEORGIA O’KEEFFE, *THE LAWRENCE TREE*, 1929
  - D. Modernist Photography
    - 1. SELECTED WORK: IMOGEN CUNNINGHAM, *LEAF PATTERN*, BEFORE 1929
    - 2. SELECTED WORK: MAN RAY, *RAYOGRAPH*, 1922
- III. JAZZ AGE CITY LIFE 25%
- A. Urban Trends
    - 1. Population Shifts
    - 2. Infrastructure and City Planning
    - 3. SELECTED WORK: WILLIAM VAN ALLEN, CHRYSLER BUILDING, NEW YORK, NEW YORK, 1928–30
  - B. Gender, Fashion, and Consumer Culture
    - 1. SELECTED WORK: GUY PÈNE DU BOIS, *WOMAN ON SOFA*, c. 1922–27
    - 2. SELECTED WORK: FLORINE STETTHEIMER, *SPRING SALE AT BENDEL’S*, 1921
    - 3. SELECTED WORK: JAMES VAN DER ZEE, *COUPLE, HARLEM*, 1932
  - C. Urban Entertainment during Prohibition
    - 1. SELECTED WORK: ARCHIBALD MOTLEY JR., *SATURDAY NIGHT*, 1935
    - 2. SELECTED WORK: THOMAS HART BENTON, *CITY ACTIVITIES WITH DANCE HALL FROM AMERICA TODAY*, 1930–31
- IV. GLOBAL CONNECTIONS 20%
- A. American Art in a Global Context
  - B. American Expatriates in Europe
    - 1. SELECTED WORK: GERALD MURPHY, *WATCH*, 1925
  - C. Embracing Influences from Africa, Asia, and Latin America
    - 1. SELECTED WORK: META WARRICK FULLER, *ETHIOPIA AWAKENING*, c. 1921
    - 2. SELECTED WORK: YASUO KUNIYOSHI, *BOY STEALING FRUIT*, 1923
    - 3. SELECTED WORK: FRANK LLOYD WRIGHT, ENNIS HOUSE, LOS ANGELES, CALIFORNIA, 1923–24
  - D. Indigenous Modernism
    - 1. SELECTED WORK: MARIA AND JULIAN MARTINEZ, *BOWL AND PLATE*, c. 1925–1930s
- V. SOCIAL CONFLICTS 15%
- A. Industrial Labor

1. SELECTED WORK: CHARLES SHEELER, *CRISS-CROSSED CONVEYORS*, 1927
- B. Political Activism by Artists
  1. SELECTED WORK: TINA MODOTTI, *HANDS RESTING ON A TOOL*, 1927
  2. SELECTED WORK: AARON DOUGLAS, *LET MY PEOPLE GO*, c. 1935–39

# ECONOMICS

## *An Introduction to Economics and the U.S. Economy in the 1920s*

- I. FUNDAMENTAL ECONOMIC CONCEPTS 10%
  - A. Basic Assumptions of Economics
    - 1. Scarcity
    - 2. Trade-offs
    - 3. Opportunity Cost
    - 4. Rationality
    - 5. Gains from Trade
  - B. Models and Economic Theory
  - C. Positive and Normative Economics
  - D. Efficiency as a Goal
  - E. Microeconomics and Macroeconomics
  
- II. MICROECONOMICS 40%
  - A. Perfectly Competitive Markets
    - 1. Markets
    - 2. Demand
    - 3. Shifts in the Demand Curve
      - a. Income
      - b. The Prices of Related Goods
      - c. Tastes
      - d. Expectations
      - e. Number of Buyers
    - 4. Supply
    - 5. Shifts in the Supply Curve
      - a. Input Prices
      - b. Technology
      - c. Expectations
      - d. Number of Sellers
    - 6. Equilibrium
    - 7. The Characteristics of Competitive Market Equilibrium
  - B. Applications of the Competitive Market Model
    - 1. Changes in Market Equilibrium
    - 2. Elasticity
    - 3. Using Elasticity
  - C. Evaluating Government Policy: The Impact of Price Controls and Taxes
    - 1. Price Controls
    - 2. Taxes
  - D. International Trade
    - 1. An Isolated Economy
    - 2. Adding the Opportunity to Trade

- 3. Comparative Advantage and the Gains from Trade
- 4. The Political Economy of Trade
- E. The Profit Motive and the Behavior of Firms
  - 1. Economic Profits and Accounting Profits
  - 2. Finding the Firm's Supply Curve
  - 3. Entry, Exit, and the Market Supply Curve
- F. Imperfect Competition
  - 1. Monopoly
  - 2. Monopoly Supply
  - 3. Welfare Consequences of Monopoly
  - 4. Dealing with Monopolies
  - 5. Price Discrimination
  - 6. Oligopoly
  - 7. Monopolistic Competition
- G. Creative Destruction: The Profit Motive and the Sources of Economic Change
- H. Market Failures
  - 1. Externalities
  - 2. The Effect of Externalities on Resource Allocation
  - 3. Private Responses to Externalities
  - 4. Government Regulation of Externalities
  - 5. Property Rights
  - 6. The Effects of Private Ownership
  - 7. Public and Private Goods
    - a. Private Goods
    - b. Common Resources
    - c. Collective Goods
    - d. Public Goods
- I. Institutions, Organizations, and Government
  - 1. Pork Barrel Politics
  - 2. Rent-Seeking
  - 3. What Is the Proper Role for Government?

### III. MACROECONOMICS

30%

- A. Macroeconomic Issues
  - 1. Economic Growth and Living Standards
  - 2. Recessions and Expansions
  - 3. Unemployment
  - 4. Inflation
  - 5. International Trade
- B. Macroeconomic Measurement
  - 1. Measuring Total Output: Gross Domestic Product
    - a. Market Value
    - b. Final Goods and Services
    - c. Within a Country
    - d. During a Specified Period

2. Understanding What GDP Measures
3. Other Ways to Measure GDP: Expenditures Equal Production
4. Yet Another Way to Measure GDP: Income Equals Production Equals Expenditures
5. Real GDP
6. Measuring Inflation
7. Unemployment
  - a. Frictional Unemployment
  - b. Structural Unemployment
  - c. Cyclical Unemployment
- C. Economic Growth, Productivity, and Living Standards
  1. The Circular Flow Model of the Economy
  2. What Determines How Much an Economy Produces?
- D. Savings, Investment, and the Financial System
  1. Financial Markets
    - a. The Bond Market
    - b. The Stock Market
  2. Financial Intermediaries
    - a. Banks
    - b. Mutual Funds
  3. Saving and Investment in Aggregate
  4. International Capital Flows in an Open Economy
  5. How Financial Markets Coordinate Saving and Investment Decisions
- E. Money and Prices in the Long Run
  1. What Is Money?
  2. Measuring Money
  3. The Federal Reserve System, Banks, and the Supply of Money
  4. Bank Runs
  5. Money and Inflation in the Long Run
  6. Why Worry about Inflation?
- F. Short-Run Economic Fluctuations
  1. Characteristics of Short-Run Fluctuations
  2. Potential Output, the Output Gap, and the Natural Rate of Unemployment
  3. Explaining Short-Run Fluctuations in Output
  4. The Aggregate Demand Curve
    - a. Wealth Effects
    - b. Interest Rate Effects
    - c. Foreign Exchange Effects
  5. The Aggregate Supply Curve
  6. The Keynesian Model of Short-Run Fluctuations
  7. Inflation in the Keynesian Model
  8. Using Fiscal and Monetary Policy to Stabilize the Economy

#### IV. THE U.S. ECONOMY IN THE 1920s      20%

- A. Prosperity in the Roaring 1920s
  1. Economic Growth and Innovation

2. Consumer Credit Expansion
3. The Urban Housing Boom
4. The U.S. in a Global Context
- B. The Rise and Role of Government
  1. Local Government
  2. The Federal Government
- C. The 1929 Stock Market Crash and the Great Depression
  1. The Seeds of the Crash
  2. The 1929 Crash: Facts and Figures
  3. The Government Response
  4. The 1937 Recession
  5. World War II: The Economic Crisis Finally Ends
- D. The Legacy of the 1920s
  1. Regulation
  2. Comparing the Great Depression with the Great Recession

## LITERATURE

### *An Introduction to the Literature of the Jazz Age*

- I. CRITICAL READING 15%
  - A. Purpose and Main Idea
  - B. Structure
  - C. Restatement of Information
  - D. Genres and their Characteristics
  - E. Language and Tone
  - F. Grammar and Syntax
  - G. Vocabulary in Context
  - H. Diction
  
- II. A BRIEF HISTORICAL OVERVIEW OF THE ROARING TWENTIES 10%
  - A. Postwar American Economic Prosperity
  - B. Urbanization, the Great Migration, and the Growth of the American City
  - C. Prohibition and Its Discontents
  - D. Feminism, Suffrage, and Cultural Revolutions
  - E. Jazz, Blues, and the Harlem Renaissance
  - F. Modernism at Home and Abroad
  
- III. F. SCOTT FITZGERALD'S *THE GREAT GATSBY* (1925) 40%
  - A. F. Scott Fitzgerald Biography
    - 1. Early Life and Education
    - 2. Publication of *This Side of Paradise* and *The Beautiful and Damned*
    - 3. Publication of *The Great Gatsby* and *Tender is the Night*
    - 4. Later Career and Literary Legacy
  - B. Plot and Structure
  - C. Characters
    - 1. Nick Carraway
    - 2. Jay Gatsby/James Gatz
    - 3. Daisy Buchanan
    - 4. Tom Buchanan
    - 5. Jordan Baker
    - 6. Myrtle Wilson
    - 7. George Wilson
    - 8. Meyer Wolfsheimer
  - D. Themes and Interpretations
    - 1. Social Class: Wealth, Power, and Prestige
    - 2. "Warm Center" vs. "Ragged Edge": Geography and Place
    - 3. Moral Hypocrisy in the Jazz Age
    - 4. Memory and Nostalgia
    - 5. The "American Dream" and Selfhood

## E. Reception and Legacy

### IV. SHORTER SELECTIONS 35%

- A. Essay: F. Scott Fitzgerald, "Echoes of the Jazz Age" (Excerpted), 1931
  - 1. F. Scott Fitzgerald Biography and Background
  - 2. SELECTED WORK: EXCERPTS FROM "ECHOES OF THE JAZZ AGE" BY F. SCOTT FITZGERALD
  - 3. Analysis of "Echoes of the Jazz Age"
- B. Poetry: Hart Crane, "Chaplinesque," 1926
  - 1. Hart Crane Biography and Background
  - 2. SELECTED WORK: "CHAPLINESQUE" BY HART CRANE
  - 3. Analysis of "Chaplinesque"
- C. Essay: H. L. Mencken, Selections from "Advice to Young Men," 1922
  - 1. H. L. Mencken Biography and Background
  - 2. SELECTED WORK: SELECTIONS FROM "ADVICE TO YOUNG MEN" BY H. L. MENCKEN
  - 3. Analysis of "Advice to Young Men"
- D. Fiction: Katherine Anne Porter, "Rope," 1928
  - 1. Katherine Anne Porter Biography and Background
  - 2. SELECTED WORK: "ROPE" BY KATHERINE ANNE PORTER
  - 3. Analysis of "Rope"
- E. Poetry: Edna St. Vincent Millay, "I, being born a woman and distressed," 1923
  - 1. Edna St. Vincent Millay Biography and Background
  - 2. SELECTED WORK: "I, BEING BORN A WOMAN AND DISTRESSED" BY EDNA ST. VINCENT MALLAY
  - 3. Analysis of "I, being born a woman and distressed"
- F. Poetry: Sterling A. Brown's "Salutamas," 1927
  - 1. Sterling A. Brown Biography and Background
  - 2. SELECTED WORK: "SALUTAMAS" BY STERLING BROWN
  - 3. Analysis of "Salutamas"
- G. Poetry: Georgia Douglas Johnson's "Shall I Say, 'My Son, You're Branded'?" 1919
  - 1. Georgia Douglas Johnson Biography and Background
  - 2. SELECTED WORK: "SHALL I SAY, 'MY SON, YOU'RE BRANDED'?" BY GEORGIA DOUGLAS JOHNSON
  - 3. Analysis of "Shall I Say, 'My Son, You're Branded'?"
- H. Poetry: Langston Hughes, "The Weary Blues," 1926
  - 1. Langston Hughes Biography and Background
  - 2. SELECTED WORK: "THE WEARY BLUES" BY LANGSTON HUGHES
  - 3. Analysis of "The Weary Blues"
- I. Essay: Zora Neale Hurston, "The Ten Commandments of Charm," 1925
  - 1. Zora Neale Hurston Biography and Background
  - 2. SELECTED WORK: "THE TEN COMMANDMENTS OF CHARM" BY ZORA NEALE HURSTON
  - 3. Analysis of "The Ten Commandments of Charm"

# MATHEMATICS

## *Algebra and Trigonometry*

### I. ALGEBRA

60%

#### A. Basic Properties of the Real Numbers

#### B. Linear and Quadratic Equations

1. Linear Equations
2. Quadratic Equations
  - a. Equations of the form  $x^2 - p = 0$
  - b. Equations of the form  $k(x + r)^2 - p = 0$ , where  $k \neq 0$
  - c. Equations of the form  $ax^2 + bx + c = 0$ , where  $a \neq 0$
  - d. The discriminant

#### C. Polynomial Equations

1. Equivalent Polynomials
2. Addition and Subtraction of Polynomials
3. Multiplication of Polynomials
4. Division of Polynomials
5. Division of Polynomials and Solving Polynomial Equations
6. Proof of the Rational Root Theorem
7. Proof of the Factor Theorem
8. Complex Numbers
  - a. Addition of complex numbers
  - b. Multiplication of complex numbers
  - c. Division of complex numbers

#### D. Functions

1. Preliminaries
2. Definition of a Function
3. Many-to-One Functions versus One-to-One Functions
4. Inverse Functions

#### E. Graphing

1. The Graph of a Linear Function  $y = ax + b$
2. The Graph of a Quadratic Function  $y = ax^2 + bx + c$ 
  - a. The case  $y = x^2$
3. The Graphs of Polynomials
4. The Graph of the Exponential Function  $y = a^x$
5. The Graph of the Logarithmic Function  $y = \log_a x$
6. Transformations of Graphs
  - a. Graphing  $y = f(x + c)$  from the graph of  $y = f(x)$

- b. Graphing  $y = f(x) + C$  from the graph of  $y = f(x)$
- c. Graphing  $y = f(ax)$  from the graph of  $y = f(x)$
- d. Graphing  $y = Af(x)$  from the graph of  $y = f(x)$

#### F. Non-polynomial Equations

1. Rational Equations
  - a. Solving rational equations
  - b. Graphs of rational functions
2. Exponential Equations
  - a. Basic properties
  - b. Solving exponential equations
3. Logarithmic Equations
  - a. Basic properties
  - b. Solving logarithmic equations
4. Radical Equations
  - a. Method 1
  - b. Method 2

#### G. Inequalities

1. Linear Inequalities
2. Quadratic Inequalities
  - a. Inequalities of the form  $ax^2 + bx + c > 0$  and  $a > 0$
  - b. Inequalities of the form  $ax^2 + bx + c < 0$  and  $a > 0$

#### H. Coordinate Geometry

1. The Pythagorean Theorem
2. Points
3. Lines
  - a. Slope form
  - b. Point-point form
  - c. Slope-point form
  - d. Mutual positions of lines
4. Circles
5. Solving Geometry Problems Using Coordinate Geometry

## II. TRIGONOMETRY

40%

#### A. Trigonometric Functions

1. The Sine Function for Acute Angles
2. The Tangent Function for Acute Angles
3. The Cosine and Cotangent Functions for Acute Angles
4. Relations among Trigonometric Functions
5. Trigonometric Functions of Special Angles
6. Trigonometric Functions of Angles of Any Measure
  - a. Definitions and properties

- b. Negative angles
- 7. Trigonometric Identities
  - a. Sum and difference identities
  - b. Double-angle identities
  - c. Half-angle identities
  - d. Sum-to-product identities
  - e. Product-to-sum identities
- 8. Graphs of Trigonometric Functions
- 9. Inverse Trigonometric Functions
- 10. Trigonometric Equations
- 11. The Law of Sines and Cosines
- 12. Radians

# MUSIC

## *The Music of the Jazz Age*

### I. BASIC ELEMENTS OF MUSIC THEORY

20%

#### A. Sound and Music

1. Definitions
  - a. Music is sound organized in time
  - b. Music of the Western world
2. Physics of Musical Sound
  - a. Sound waves
  - b. Instruments as sound sources

#### B. Pitch, Rhythm, and Harmony

1. Pitch
  - a. Pitch, frequency, and octaves
  - b. Pitch on a keyboard
  - c. Pitch on a staff
  - d. Pitch on the grand staff
  - e. Overtones and partials
  - f. Equal temperament: generating the 12 pitches by dividing the octave
  - g. Scales: leading tone, tonic, dominant
  - h. Intervals
  - i. Intervals of the major scale
  - j. Minor scales and Blues inflections
  - k. Melody defined; example, using scale degrees
  - l. Contour
  - m. Range and tessitura
2. Rhythm
  - a. Beat
  - b. Tempo
  - c. Meter: duple, triple, and quadruple
  - d. Rhythmic notation
  - e. Time signature
  - f. Simple and Compound Subdivision
  - g. Mixed and irregular meter
  - h. Syncopation
  - i. Polyrhythm
3. Harmony
  - a. Common-practice tonality
  - b. Chords
    - i. Triads
    - ii. Inversions
  - c. Keys
    - i. Keys and key signatures

- ii. Hierarchy of keys: circle of fifths
    - d. Harmonic progression
      - i. Dissonance and consonance
      - ii. Diatonic triads
      - iii. The dominant triad's special role
      - iv. Bass lines
      - v. The dominant seventh chord
      - vi. Example: a harmonized melody
    - e. Other diatonic chords
    - f. Chromatic harmonies and modulation
    - g. Beyond common practice
  - C. Other Aspects of Musical Sound
    - 1. Texture, Counterpoint, Instrumentation, More Timbre
    - 2. Dynamics, Articulation, Ornamentation
  - D. Form in Music
    - 1. Perceiving Musical Form
    - 2. Elements of Form
      - a. Motive
      - b. Phrase
      - c. Cadence
      - d. Theme
      - e. Introduction and Coda
    - 3. Common Forms
      - a. Repetition
      - b. Variation
        - i. Theme and variations
        - ii. 12-bar blues
        - iii. Improvisation
      - c. Contrast
        - i. Ternary and rondo forms
          - ii. 32-bar form
          - iii. Verse-chorus form
      - d. Development
        - i. Fugue
        - ii. Sonata form
  - E. Which Is the Real Music? Scores, Recordings, and Performance

## II. THE INCREASING REACH OF JAZZ AND BLUES

24%

- A. Singing the Blues
  - 1. Shades of Blues
  - 2. The Empress of the Blues
  - 3. LISTENING COMPANION 1: "LOST YOUR HEAD BLUES" (1926) – BESSIE SMITH
- B. Jazz + Blues
  - 1. The Cradle of Jazz

2. A Recipe for Jazz
  3. The End of Storyville
  4. Heading North
  5. LISTENING COMPANION 2: “DIPPERMOUTH BLUES” (1923) – JOE “KING” OLIVER
- C. Jazz Thrives in Chicago
1. The Jazz Wonder Child
  2. The Hot Five (Plus)
  3. LISTENING COMPANION 3: “HOTTER THAN THAT” (1927) – LILLIAN HARDIN ARMSTRONG
- D. Jazz Looks Ahead
1. The Duke
  2. The Count
  3. The Father of Big Band Jazz
  4. LISTENING COMPANION 4: “THE STAMPEDE” (1926) – FLETCHER HENDERSON

### III. JAZZ ON STAGE, ON THE AIR, AND ON-SCREEN

28%

- A. Jazz on Broadway
1. *Shuffle Along*
  2. *Runnin’ Wild*
  3. LISTENING COMPANION 5: *RUNNIN’ WILD*, “THE CHARLESTON” (1923) – JAMES P. JOHNSON
- B. Broadway Turns the Tables
1. Saying Yes to *No, No, Nanette*
  2. Jazzomania
  3. Other Composers Take Notice
  4. LISTENING COMPANION 6: *NO, NO, NANETTE*, “TEA FOR TWO” (1925) – VINCENT YOUMANS
- C. Jazz as Subtext
1. Making Musicals Meaningful
  2. Music as Identifier
  3. LISTENING COMPANION 7: *SHOW BOAT*, “CAN’T HELP LOVIN’ DAT MAN” (1927) – JEROME KERN
- D. Jazz on the Radio
1. The “Alley”
  2. Broadcaster Ben Bernie
  3. LISTENING COMPANION 8: “SWEET GEORGIA BROWN” (1925) – BEN BERNIE AND MACEO PINKARD
- E. Jazz in the Movies
1. Music for “Silent” Movies
  2. Breaking the “Sound” Barrier
  3. LISTENING COMPANION 9: *THE JAZZ SINGER*, “TOOT, TOOT, TOOTSIE! (GOO’ BYE)” (1927) – GUS KAHN, ERNIE ERDMAN, AND DAN RUSSO

#### IV. JAZZ IN THE CONCERT HALL

28%

##### A. Jazz at the Ballet

1. *Le globe trotter*
2. Creating a World
3. LISTENING COMPANION 10: *LA CRÉATION DU MONDE*, OVERTURE AND TABLEAU I (1922–23) – DARIUS MILHAUD

##### B. Jazz at Carnegie Hall

1. The Jazz Stepping Stone
2. After Carnegie Hall
3. LISTENING COMPANION 11: *RHAPSODY IN BLUE* (EXCERPT) (1924/1942) – GEORGE GERSHWIN

##### C. Jazz for Small Orchestras

1. Patrons Pave the Way
2. From the Colony and the Clouds
3. LISTENING COMPANION 12: *MUSIC FOR THE THEATRE*, MVT. IV: “BURLESQUE” (1925) – AARON COPLAND

##### D. Jazz for Chamber Musicians

1. Bringing Jazz Back Home
2. LISTENING COMPANION 13: *VIOLIN SONATA [NO. 2]*, MVT. II: “BLUES” (1927) – MAURICE RAVEL

##### E. Jazz for the Concert Pianist

1. Overcoming Obstacles
2. LISTENING COMPANION 14: *SICILIENNE* (1928) – GERMAINE TAILLEFERRE

# SCIENCE

## *An Introduction to Electricity and Magnetism*

- I. ELECTRICITY 20%
  - A. Charged Particles
    - 1. A Brief History of the Atom
    - 2. Benjamin Franklin's Electrical Fire
    - 3. Electrons and Protons
  - B. The Electric Force
    - 1. Scientific Notation
    - 2. The Weight of an Electron
    - 3. Coulomb's Law
    - 4. Electric Fields
    - 5. Symmetry and Gauss's Law
  - C. Electricity in Materials
    - 1. Static Electricity
    - 2. Electric Polarization
    - 3. Conductors and Insulators
  
- II. CIRCUITS 30%
  - A. Energy
    - 1. Kinetic and Potential Energy
    - 2. Voltage
    - 3. Batteries
  - B. Simple Circuits
    - 1. A Fluid Model
    - 2. Electricity Is Life
    - 3. Ohm's Law
    - 4. Power
  - C. More Complicated Circuits
    - 1. The Path of Least Resistance
    - 2. Capacitors
    - 3. Dielectrics
  
- III. MAGNETISM 30%
  - A. The Magnetic Field
    - 1. North and South
    - 2. The Origin of Magnetic Fields
    - 3. Is the Magnetic Force Fundamental?
    - 4. The Compass
    - 5. Earth's Protective Force Field
  - B. Electromagnetism
    - 1. The Magnetic Force
    - 2. Solenoids

- 3. Faraday's Law
- C. The Electrical Grid
  - 1. Transformers
  - 2. Circuit Resonance
  - 3. The Current Wars
  
- IV. ELECTROMAGNETIC WAVES 20%
  - A. The Generation of Electromagnetic Waves
    - 1. The Speed of Light
    - 2. Wave Mechanics
    - 3. The Electromagnetic Spectrum
  - B. Applications of Electromagnetic Waves
    - 1. Polarizers
    - 2. Long-Distance Communication
    - 3. Radio and Television
    - 4. LEDs and Solar Power
  - C. Relativity
    - 1. Consequences of a Constant Speed of Light
    - 2. The Relativity of Electric and Magnetic Fields

## SOCIAL SCIENCE

### *The Roaring Twenties*

- I. POST-WAR AMERICA: THE DAWN OF A NEW ERA 25%
    - A. 1919: A Tumultuous Year
      - 1. “Peace Without Victory:” Wilson’s Triumph and Downfall
        - a. The Fourteen Points and the Paris Peace Conference
        - b. Cross-Country Tour and Health Crisis
        - c. The Demise of the Treaty
      - 2. The Erosion of Civil Liberties
        - a. Labor Strife and Radicalism
        - b. The Red Scare
        - c. First Amendment Supreme Court Cases
        - d. The Sacco and Vanzetti Trial
      - 3. A Watershed Moment for African-American Culture and Politics
        - a. The Great Migration
        - b. Jazz Conquers the Globe
        - c. The Red Summer
        - d. Marcus Garvey and the UNIA
    - B. Constitutional Amendments and the End of the Progressive Era
      - 1. The Eighteenth Amendment
      - 2. The Nineteenth Amendment
    - C. A “Return to Normalcy”: Republican Rule Returns to Washington
      - 1. Warren Harding and the Election of 1920
      - 2. Foreign Affairs
        - a. Washington Conference
        - b. The Dawes Plan
      - 3. Domestic Scandals:
        - a. Ponzi’s Scheme
        - b. Teapot Dome
      - 4. Calvin Coolidge and the Gospel of Business
- II. PROSPERITY AND TECHNOLOGICAL ADVANCEMENT 25%
  - A. Mass Production: The Automobile
    - 1. Henry Ford and Fordism
    - 2. Welfare Capitalism
    - 3. A Nation on Wheels
  - B. Mass Consumption
    - 1. Electrification and Home Appliances
    - 2. Advertising
    - 3. Easy Credit
  - C. Mass Communication: The Radio
    - 1. The Broadcasting Revolution
    - 2. The Domestic and Global Political Impact of the Radio

- 3. The Constitution of the Air
- D. Mass Entertainment
  - 1. Movies: Hollywood
  - 2. Sports and Leisure

III. SOCIAL AND CULTURAL UPHEAVAL 30%

- A. The View from Middletown
- B. No Room in The Melting Pot
  - 1. Race and Citizenship: Supreme Court Cases
  - 2. Eugenics and Pseudoscientific Racism
  - 3. The Johnson Reed Immigration Act of 1924
  - 4. The New Ku Klux Klan
- C. “New Women”: Changing Gender Ideals
  - 1. Flappers and Feminists
  - 2. Women at Work
- D. American Moderns
  - 1. Bohemians and Ex-Pats of the “Lost Generation”
  - 2. Modernism Arrives
- E. The Harlem Renaissance and the New Negro Movement
- F. An Anxious Age
  - 1. Freud and Psychiatry in American Society
  - 2. The Mind of a Murderer: Leopold and Loeb
- G. Religion and Science
  - 1. The Scopes Trial
  - 2. Aimee Semple McPherson
- H. Prohibition
  - 1. Speakeasies, Bootleggers, and Gangsters

IV. ECONOMIC CRISIS AND THE END OF THE ROARING TWENTIES 20%

- A. The 1928 Election
  - 1. Deep Divisions: Southern Rural Drys v. Northern Urban Wets
  - 2. Hoover “The Great”
  - 2. Hoover’s Worldview
- B. Stock Market Crash
- C. The Great Depression
  - 1. Domestic Factors
  - 2. International Factors
  - 3. Hard Times
  - 4. Hoover’s Response
- D. From Bad to Worse