

*ISF Courses for  
College Board  
Advanced  
Placement  
Examinations(AP)*

# Introduction

The Advanced Placement Program (AP) was created by the College Board in the USA to allow students to get college credit for completing college – level course work while they are in the high school. Students are tested on the specific material covered in AP courses. Test results are reported on a five-point scale, with five being the highest. ISF offers a wide selection of AP courses and has traditionally outstanding AP results.

## Table of Contents

	<b>Page</b>
<b>Arts</b>	
AP Music Theory	3
AP Studio Art Drawing	3
<b>English</b>	
AP English Literature and Composition	4
<b>History and Social Science</b>	
AP European History	4
AP Human Geography	5
AP Macroeconomics	5
AP Microeconomics	6
<b>Math and Computer Science</b>	
AP Calculus AB (AP/AL)	6
AP Computer Science A	6
<b>Sciences</b>	
AP Biology	7
AP Chemistry	8
AP Physics C: Electricity & Magnetism	8
AP Physics C: Mechanics	9
<b>World Languages and Cultures</b>	
AP French Language & Culture	9
AP German Language & Culture	10
AP Spanish Language & Culture	11
German University Admission Requirements	12
General Important Notes	12
Advanced Placement International Diploma Criteria	13
German Foreign Language Examinations at ISF	13

# Arts

## AP Music Theory Course Overview

The AP Music Theory course supports mastery of the rudiments and vocabulary of music, including hearing and notating:

- Pitches
- Intervals
- Scales and keys
- Chords
- Meter
- Rhythm

Building on this foundation, the course progresses to include more complex and creative tasks, such as:

- Melodic and harmonic dictation
- Composition of a bass line for a given melody
- Implying appropriate harmony
- Realization of a figured bass
- Realization of a Roman numeral progression
- Analysis of melody, harmony, rhythm, texture, and form in repertoire drawn mostly from the Western European Common Practice style, but also including jazz, 20th century works, and world music
- Sight singing of simple melodies

Students learn to identify, both aurally and through score reading, tonal procedures based in common-practice tonality, such as:

- Functional triadic harmony in traditional four-voice texture (with vocabulary including non-harmonic tones, seventh chords, and secondary dominants)
- Cadences
- Melodic and harmonic compositional processes (e.g., sequence, motivic development)
- Standard rhythms and meters
- Phrase structure (e.g., contrasting period, phrase group)
- Small forms (e.g., rounded binary, simple ternary, theme and variation, strophic)
- Modulation to closely related keys

## AP Studio Art Drawing Course Overview

- 2 academic year course generating 24 works for submission.
- Selected work from year 10 if meeting criteria
- Breadth projects (12 digital images). Wide range of techniques and methods. 2-d and 3-d work included. This work should include observational studies.
- Selected experiments. Students develop expertise in various chosen media.
- Concentration project (12 digital images). Student develops a theme based series. Some images may be details of final work.
- Selection for quality component (5 original works). Works that display high level understanding of concepts and illustrate particular surface qualities.
- 4 finished works expected per term including given assignments.

# English

## AP English Literature and Composition Course Overview

- Preparation of a Research Paper in MLA format
- Poetry from 16<sup>th</sup> to 20<sup>th</sup> century, as prescribed by the AP examination syllabus (Selection of British and American poems)
- Drama from 16<sup>th</sup> to 20<sup>th</sup> century, as prescribed by the AP examination syllabus
- Fiction from 16<sup>th</sup> to 20<sup>th</sup> century, as prescribed by the AP examination syllabus
- Expository prose from 16<sup>th</sup> to 20<sup>th</sup> century, as prescribed by the AP examination syllabus
- Comprehension from a variety of AP recommended sources; practice past AP Literature and Composition papers
- Composition based upon texts studied in class; practice past AP Literature and Comprehension papers.

# History and Social Science

## AP European History Course Overview

- Pre-Renaissance Europe; Renaissance in Italy
- Renaissance outside Italy; The 'New' Monarchies; Commercial Revolution
- The Reformation; Causes, Calvin, Luther; Reformation in England
- The Counter-Revolution; Council of Trent; the Jesuits; Philip II
- Age of Religious Wars; French Wars of Religion; the 30 Years' War
- England in the 17<sup>th</sup> Century; Stuart kings and their relationship with Parliament; Civil War; Cromwell's Republic; Restoration of the Stuarts in 1660 and their final overthrow in 1688
- France in the 17<sup>th</sup> Century; Reign of Louis XIV; Rise of Prussia in the 17/18<sup>th</sup> Centuries
- Russia before and during the reign of Peter the Great
- Age of Reason; Revolution of Scientific Thinking
- Political Theory; Hobbes and Locke; French Philosophers
- Enlightened Despotism Fredrick the Great, Catherine the Great and Joseph II
- Industrialization; Classical Economics; Agricultural and Industrial Revolutions; Social consequences
- France 1780's; 1815
- 1815-1848: The Age of 'isms' (Nationalism, Liberalism, Socialism, Marxism)
- France 1815/1848 and other 1848 revolutions
- Britain in the 19<sup>th</sup> century
- Unifications of Italy and Germany
- Domestic Affairs in Napoleon III's France and Bismarck's Germany
- Imperialism
- The Great War to 1917
- Russia to 1917
- The end of the Great War 1917/18
- Treaty of Versailles

- Stalin's Russia
- Germany 1919-1929
- Germany 1929-1939
- Origins of World War II
- World War in Europe
- Europe since 1945

## **AP Human Geography Course Overview**

The purpose of the AP course in Human Geography is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of the Earth's surface. Students employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. They also learn about the methods and tools geographers use in their science and practice.

It is divided into the following 7 core themes:

- Geography: Its Nature and Perspectives
- Population
- Cultural Patterns and Processes
- Political Organization of Space
- Agricultural and Rural Land Use
- Industrialization and Economic Development
- Cities and Urban Land Use

## **AP Macroeconomics Course Overview**

- Resource allocation
- Supply and demand
- Overview of Macroeconomics
- National income accounting
- Theory of income determination: consumption and saving
- Investment
- Aggregate demand
- Keynesian multiplier model of output
- Determination in a closed economy
- Keynesian multiplier model of output
- Determination in an open economy
- Money, banking, and monetary policy
- Determination of interest rate
- Economic growth
- Aggregate supply
- Business cycles
- Unemployment
- Inflation
- Different schools of Macroeconomics
- Budgets and fiscal policy
- International trade
- The balance of payments

- Exchange rate systems and international cooperation
- Economic development
- Economic systems

## **AP Microeconomics Course Overview**

- Fundamentals of economics
- Modern economy
- Supply and demand
- Applications of supply and demand behavior
- Demand and consumer
- Production and business organization
- Analysis of costs
- Analysis of perfectly competitive markets
- Imperfect competition: monopolies
- Oligopoly and monopoly competition
- Game theory
- Uncertainty
- How markets determine income
- The labor market
- Land and capital
- Comparative advantages
- Government taxation and expenditure
- Promoting efficiency in markets
- Efficiency vs. equity trade-off

## **Math and Computer Science**

### **AP Calculus AB Course Overview**

- Limits and Continuity
- Derivatives
- Applications of Derivatives
- Integration
- Applications of Integrals
- Transcendental Functions and Differential Equations
- Integration Techniques, L' Hopital's Rule, and Improper Integrals
- Vectors

### **AP Computer Science A Course Overview**

- Introduction to Java, internet and the web
- Introduction to Java applications
- Java applets
- Algorithms and pseudo code
- Logical operators

- Structured programming
- Arrays
- Object-based programming
- Object-oriented programming
- String and characters
- Graphics
- Graphical user interface
- Data structures

## Sciences

### AP Biology Course Overview

#### Chemistry of life

- Water, organic molecules in organisms
- Free energy changes
- Enzymes

#### Cells

- Prokaryotic and eukaryotic cells
- Membranes
- Subcellular organization
- Cell cycle and its regulation

#### Cellular energetics

- Coupled reactions
- Fermentation and cellular respiration
- Photosynthesis

#### Heredity and evolution

- Heredity
- Meiosis and gametogenesis
- Eukaryotic chromosomes
- Inheritance patterns

#### Molecular genetics

- RNA and DNA structure and function
- Gene regulations
- Mutation
- Viral structure and replication
- Nucleic acid technology and applications

#### Evolutionary Biology

- Organisms and populations
- Diversity of organisms
- Structure and functions of plants and animals
- Ecology

## AP Chemistry Course Overview

Structure of matter: Atomic theory and atomic structure

- Evidence for atomic theory
- Atomic mass
- Atomic number and mass number, isotopes
- Electron energy levels: spectra, quantum numbers
- Periodic relationships for atomic radii, ionisation energies, electron affinities and oxidation states

Chemical bonding

- Binding forces
- Types of bonding
- Relationships to states, structure and properties of matter
- Polarities of bonds and electro-negativities

Molecular models

- Lewis structures
- Valence bond
- VSEPR

Geometry of molecules and ions, structure isomerism of simple organic molecules  
Nuclear chemistry, States of matter

Gases

- Laws of ideal gases
- Equation of state for an ideal gas
- Partial pressure
- Kinetic molecular theory
- Liquids and solids
- Solutions

Reactions

- Reaction types
- Stoichiometry
- Equilibrium
- Kinetic
- Thermodynamics

Descriptive Chemistry

- Chemical reactivity
- Relationships in the Periodic Table
- Organic Chemistry

## AP Physics C: Electricity & Magnetism Course Overview

- Electrostatics, including Coulombs law & Gauss's law
- Conductors, capacitors and dielectrics
- Electric circuits
- Magnetic fields, including the Biot-Savart law and Ampere's law
- Electromagnetism, including Faraday's law, Lenz's law & Maxwell's equations



## AP Physics C: Mechanics Course Overview

- Kinematics
- Newton's laws of motion
- Work, energy and power
- System of particles, linear momentum
- Circular motion and rotation
- Oscillations & gravitation

## World Languages and Cultures

### AP French Language and Culture Course Overview

The AP French Language and Culture course emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. The AP French Language and Culture course strives not to overemphasize grammatical accuracy at the expense of communication. To best facilitate the study of language and culture, the course is taught almost exclusively in French.

The AP French Language and Culture course engages students in an exploration of culture in both contemporary and historical contexts. The course develops students' awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions).

#### Course themes

The AP French Language and Culture course is structured around six themes:

- Beauty and Aesthetics
- Contemporary Life
- Families and Communities
- Global Challenges
- Personal and Public Identities
- Science and Technology

Themes facilitate the integration of language, content, and culture and promote the use of the language in a variety of contexts. The themes may be combined, as they are interrelated.

Written and speaking comprehension: 95 minutes - 50% of the exam

**Part A:** 30 questions - 40 minutes

- 3 written texts + multiple choice questions
- 1 written text + a graph / grid + multiple choice questions

**Part B:** 35 questions - 55 minutes

- Section 1 => 2 written texts + 2 audio texts + multiple choice questions
- Section 2 => 3 audio texts + multiple choice questions

Written and speaking exams: 85 minutes - 50% of the exam

### Written exams

- Email => 15 minutes
- Persuasive essay => 55 minutes: 15 minutes to study the material  
40 minutes to write the essay

### Speaking exams

- Conversation => 15 minutes
- Cultural comparison => 5 minutes \* 3-minute-preparation  
\* 2-minute-recording

## **AP German Language and Culture Course Overview**

The course will address the following six themes:

- Global Challenges
- Science and Technology
- Contemporary Life
- Personal and Public Identities
- Families and Communities
- Beauty and Aesthetics

Students will be able to demonstrate sufficient proficiency in the three Communicative Modes:

- Interpersonal Communication (written and spoken)
- Interpretive Communication (audio, visual, and audio-visual as well as written and print)
- Presentational Communication (written and oral)

Written and speaking comprehension: 95 minutes - 50% of the exam

**Part A:** 30 questions - 40 minutes

- 3 written texts + multiple choice questions
- 1 written text + a graph / grid + multiple choice questions

**Part B:** 35 questions - 55 minutes

- Section 1 => 2 written texts + 2 audio texts + multiple choice questions
- Section 2 => 3 audio texts + multiple choice questions

Written and speaking exams: 85 minutes - 50% of the exam

### Written exams

- Email => 15 minutes
- Persuasive essay => 55 minutes 15 minutes to study the material  
40 minutes to write the essay

### Speaking exams

- Conversation => 15 minutes
- Cultural comparison => 5 minutes \* 3-minute-preparation  
\* 2-minute-recording

# AP Spanish Language and Culture Course Overview

## Grammar

- Conjugation same as IGCSE
- All points from IGCSE
- Passive form
- Indefinite words
- Prepositions

## Listening

- Follow the essential of conversation between educated speakers who may occasionally use colloquial expressions
- Understand standard Spanish transmitted clearly by such means as tapes recording, radio, etc.

## Speaking

- Communicate facts, idea and feelings successfully in a form of speech understandable to the native speaker.
- Express personal opinions, including hypotheses and conjecture.
- Narrate, describe and explain
- Have a broad range of vocabulary items in order to speak with fluency and accuracy

## Reading Comprehension

## Composition

Written and speaking comprehension: 95 minutes - 50% of the exam

**Part A:** 30 questions - 40 minutes

- 3 written texts + multiple choice questions
- 1 written text + a graph / grid + multiple choice questions

**Part B:** 35 questions - 55 minutes

- Section 1 => 2 written texts + 2 audio texts + multiple choice questions
- Section 2 => 3 audio texts + multiple choice questions

Written and speaking exams: 85 minutes - 50% of the exam

## Written exams

- Email => 15 minutes
  - Persuasive essay => 55 minutes
- 15 minutes to study the material  
40 minutes to write the essay

## Speaking exams

- Conversation => 15 minutes
  - Cultural comparison => 5 minutes
- \* 3-minute-preparation  
\* 2-minute-recording

## German University Admission Requirements (High School Diploma + AP Exams)

For admission in the subjects of <b>mathematics, science, medicine, pharmacy and technical fields</b> with AP exams:	For general Admission (any course/ major):
--	--

AP Exam 1	AP Exam 2	AP Exam 3	AP Exam 4 Another subject eg.:	AP Exam 5 2 <sup>nd</sup> Language:
Calculus AB	Biology, Chemistry or Physics C	English Literature & Composition, German*, French or Spanish	Art, Computer Science, Economics, Geography or History	English Literature & Composition**, German*, French or Spanish

\* AP German is not accepted for German mother-tongue speakers.

\*\* One foreign language must be English Literature & Composition for German mother-tongue speakers.

For admission in the subjects of <b>humanities, social sciences, law, business/economics</b> with AP exams:	For general Admission (any course/ major):
---	--

AP Exam 1	AP Exam 2	AP Exam 3	AP Exam 4 Another subject eg.:	AP Exam 5 Mathematics or Science:
Calculus AB, Biology, Chemistry or Physics C	German*, French or Spanish	English Literature & Composition	Art, Computer Science, Economics, Geography or History	Calculus AB or, if already taken, a science

\* AP German is not accepted for German mother-tongue speakers.

\*\* One foreign language must be English Literature & Composition for German mother-tongue speakers.

## General Important Notes

Students who plan to apply to British universities are advised to sit their AP examinations during their last school year. For each AP course, an AP exam is administrated at participating schools worldwide. AP Studio Art has a portfolio assessment. Every other AP exam contains a free-response section (either essay or problem solving) and a section of multiple choice questions. Modern language exams also have a speaking component. Each AP exam is given an overall grade 1, 2, 3, 4 or 5, with 5 for the student who is extremely well qualified to receive college credit.

The **Advanced Placement International Diploma (APID)** is a globally recognized certificate for students with an international outlook. The APID challenges a student to display exceptional achievement on AP exams across several disciplines

## Advanced Placement International Diploma Criteria

1. Two AP exams from two different languages selected from English and/or world languages
2. One AP exam designated as offering a global perspective
3. One exam from the sciences or mathematics content areas
4. One (or two) additional exam(s) from among any content areas except English and world languages. These include the content areas already described as well as history and social sciences and arts.

## German Foreign Language Examinations at ISF

As the leading German foreign language school in the Rhein-Main area, we are constantly looking for new options to offer to our students. During the past few years, we have noticed a significant increase in demand for external foreign language exams on every language level. We would like to point out that our foreign language courses at ISF already provide a solid basis for all external exams at the corresponding level.

As we have experienced and certified teachers on our staff, we are in the fortunate position of being able to prepare students for exams individually, based on the appropriate language level. We currently prepare students for external language exams offered by the Goethe Institute, TestDaF, DSH, and many more.

Below are details on the ISF courses leading to external exams and the corresponding language levels according to the *Common European Framework of Reference for Languages* ("Gemeinsamer Europäischer Referenzrahmen"):

ISF non-IB courses	IB courses offered at ISF	Language Level according to CEFR <sup>1</sup>	Goethe-Institute exam	TestDaF
10-12 German 7 / AP		C2.2	Goethe-Zertifikat C2	
10-12 German 6		C2.1		
9-12 German 5	German B HL	C1.2	Goethe-Zertifikat C1	TestDaF 4/5
8-12 German 4	German B SL	B2	Goethe-Zertifikat B2	TestDaF 3/4
7-12 German 3	German ab initio	A2 / B1	Goethe-Zertifikat B1	

Please contact Dr. Solies (Head of Department for German as a Foreign Language grades 7-12) for more information.

<sup>1</sup> CEFR: Common European Framework of Reference for Languages ("Gemeinsamer Europäischer Referenzrahmen")