

# Advanced Master's Degree

## Didactics and Teaching Practice in Secondary Education





## Advanced Master's Degree Didactics and Teaching Practice in Secondary Education

- » Modality: online
- » Duration: 2 years
- » Certificate: TECH Global University
- » Credits: 120 ECTS
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/education/advanced-master-degree/advanced-master-degree-didactics-teaching-practice-secondary-education](http://www.techtute.com/us/education/advanced-master-degree/advanced-master-degree-didactics-teaching-practice-secondary-education)

# Index

01

Introduction

---

p. 4

02

Objectives

---

p. 8

03

Skills

---

p. 20

04

Course Management

---

p. 24

05

Structure and Content

---

p. 34

06

Methodology

---

p. 68

07

Certificate

---

p. 76

# 01

# Introduction

In the current educational context, Didactics and Teaching Practice face significant and constantly evolving challenges. Student diversity, changes in curricula or the progressive implementation of technology in the classroom are just some of the most pressing challenges in education. It is essential to address these demands and prepare to respond to them effectively, which is why TECH has developed this comprehensive program. Teachers will find comprehensive teaching, which seeks to address their current needs, providing them with the tools and strategies necessary to excel in their educational work. In addition, the programme is delivered in a 100% online format, allowing busy professionals to access the Online Campus in a flexible and convenient way.





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*Discover the most effective and up-to-date teaching strategies to enhance your teaching in secondary education, based on evidence and with a practical approach"*

Today's educational environment is constantly evolving, facing challenges that require highly trained teachers who are up to date in effective pedagogical strategies. Secondary education faces changes in curriculum, technological advances, student diversity and socio-emotional demands, among other challenges, which require teachers to adapt and excel in their educational work.

In this context, the Advanced Master's Degree in Didactics and Teaching Practice in Secondary Education is positioned as a solid and necessary response to address the current challenges of secondary education. This program has been designed with the demands of the educational environment in mind, providing teachers with the most up-to-date pedagogical tools and strategies to meet the challenges in the classroom.

One of the main justifications for the programme lies in its practical and applied approach, providing teachers with the skills and knowledge they need to excel in their educational work. The program focuses on evidence-based didactics and teaching practice, offering proven and effective strategies that can be applied immediately in the classroom to improve the teaching-learning process.

The program's teaching staff is another highlight, composed of education professionals with extensive experience in secondary education. These experts in didactics and teaching practice bring an up-to-date vision of the educational field, sharing their knowledge and experience with the participants of the program.

In addition, the 100% online format offers flexibility and accessibility for teachers interested in expanding their skills and knowledge. The program is tailored to the needs of in-service teachers, allowing them to access study materials and participate in program activities from anywhere and at any time, facilitating their participation and professional enrichment.

This **Advanced Master's Degree in Didactics and Teaching Practice in Secondary Education** contains the most complete and up-to-date educational program on the market. The most important features include:

- ◆ The development of case studies presented by education experts
- ◆ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Its special emphasis on innovative educational methodologies
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Meet the challenges of today's educational environment with tools and knowledge that will allow you to adapt and excel in the classroom, offering a high quality education to your students"*

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*Study in a 100% online format that adapts to your needs and schedule, allowing you to access the materials from anywhere and at any time"*

Its teaching staff includes professionals from the field of education, who bring to this program the experience of their work, as well as recognized specialists from reference societies and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive learning experience designed to prepare for real-life situations.

This program is designed around Problem-Based Learning, whereby the student must try to solve the different professional practice situations that arise throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Enhance your pedagogical skills and knowledge, improve your teaching practices and make a difference in secondary education.*

*Acquire the knowledge and skills necessary to excel as a leader in teaching practice.*



# 02

# Objectives

The main objective of the Advanced Master's Degree in Didactics and Teaching Practice in Secondary Education is to train highly qualified teachers to be able to face the current challenges of secondary education. This program is designed to offer participants a cutting-edge education in didactics and teaching practice, providing them with pedagogical and strategic tools to optimise their work in the classroom, promote meaningful learning in their students and contribute to improving the quality of education in their environment.





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*Develop your pedagogical and didactic skills, implementing innovative and effective approaches that enhance the teaching-learning process in secondary education"*



## General Objectives

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- ◆ Determine and specify the elements that are part of the teaching-learning process in youth education
- ◆ Outline the fundamentals, skills and competencies of the teacher as a pedagogical element and content facilitator
- ◆ Define the traits that characterize students and offer a series of techniques to perform teaching tasks in an ideal way
- ◆ Know the different types of innovative learning methodologies in Education applied to Mathematics
- ◆ Know how to apply the different types of innovative learning methodologies in education to mathematics
- ◆ Update knowledge on the practice of History and Geography teaching in Secondary and Baccalaureate, in order to increase the quality of the professional's practice in their performance
- ◆ Introduce students to new ways of teaching these subjects
- ◆ Know the tools used in current teaching practice
- ◆ Enable the student to teach in the field of music
- ◆ Introduce the student to the main characteristics of music teaching
- ◆ Show the student the main tools of work in the music classroom





## Specific Objectives

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### Module 1. Education and Development

- ◆ Know the relationships between development, learning, culture and education and understand the main conceptual controversies about human development and learning
- ◆ Define the main theoretical paradigms of human development and learning
- ◆ Discuss the determining factors, characteristics and psychological dimensions of puberty
- ◆ Understand the perceptual, cognitive and emotional correlates of the adolescent brain
- ◆ Know how attention, memory, thinking, and executive functions develop from an information processing perspective
- ◆ Describe the development of “me” in adolescence and highlight the different theories that describe identity and its development
- ◆ Know the domains of moral development and their different explanatory theories

### Module 2. The Reality of the Classroom

- ◆ Understand the role of adolescent peer and group relationships in social development
- ◆ Reflect on the functions of institutions, educational spaces, teachers and the family as relevant factors for the development of capabilities
- ◆ Design a series of strategies to minimize the damage caused by the obstacles and difficulties encountered by the learner
- ◆ Understand the nature of family processes and models in adolescence
- ◆ Interpret the learning processes from the perspective of information processing
- ◆ Understand the human mind as something inseparable from its social and cultural context
- ◆ Apply constructivist principles to educational action and compare the socioconstructivist approach with other constructivist approaches
- ◆ Define the elements, structure and functions that make up the educational system as a social system

- ◆ Present the foundations of the classroom as a didactic space
- ◆ Show who the protagonists are in the teaching-learning process
- ◆ Define the characteristics of the teacher as a mediator and outline their roles in the educational spaces

### Module 3. The Fundamentals of Teaching Language and Literature

- ◆ Understand the fundamentals of didactics of language and literature for young people
- ◆ Present and explain the different didactic approaches and pedagogical perspective in teaching Language and Literature in High School Education
- ◆ Set the objectives of teaching language and literature at the high school education level
- ◆ Reflect on the strategies for teaching grammar and literature to young people
- ◆ Define and give examples of how the curricular elements are related to each other
- ◆ Identify the complementary activities that reinforce the process of didactic programming

### Module 4. Methodology: Teaching and Programming

- ◆ Set the goals and objectives that are to be met throughout the different stages of the learning process
- ◆ Set the goals and objectives that are to be met throughout the different stages of the learning process
- ◆ Summarize the socio-cognitive approaches to learning
- ◆ Reflect on the techniques of group control
- ◆ Define what a group is and how to develop their skills through a group dynamic
- ◆ Prove the benefits of building knowledge through cooperative and interactive working in a simulated version of a real context

- ♦ Determine the different types of intelligence that students can have with the aim of minimizing their harmful effects in the learning process
- ♦ Compare the different theoretical perspectives on intelligence and distinguish the different learning styles

### **Module 5. Teaching Literature**

- ♦ Know the bases and methodology for teaching literacy
- ♦ Know how to establish an academic plan for literary education
- ♦ Gain in-depth knowledge of the mechanisms for writing a commentary

### **Module 6. Teaching Grammar**

- ♦ Determine the benefits of interaction as a didactic tool and the external and intrinsic factors that affect the linguistic development of the students
- ♦ Gain in-depth knowledge of the theoretical and practical concepts of grammar
- ♦ Know how to propose practical exercises to train grammatical skills in students
- ♦ Gain in-depth knowledge of the different methods for the linguistic commentary of a text

### **Module 7. Teaching Lexicon and Semantics**

- ♦ Know the basic foundations for lexical-semantic teaching
- ♦ Gain in-depth knowledge of the different methodologies for lexical-semantic learning
- ♦ Be able to teach through exercises based on lexical-semantic practice

### **Module 8. Foundations of Didactics of Spanish as a Second Language**

- ♦ Know the fundamentals of teaching and learning second languages
- ♦ Gain in-depth knowledge of the different methodological approaches for SFL teaching
- ♦ Learn and apply effective pedagogical approaches in teaching grammar
- ♦ Know how to establish an educational plan based on the fundamentals of ELE teaching
- ♦ Be able to apply other resource such as games and theater, which are extremely useful in ELE methodology

### **Module 9. Learning Mathematics in Secondary School**

- ♦ Discover the role of learning
- ♦ Introduce mathematical language
- ♦ Understand the development of intelligence and mathematics
- ♦ Learn about the relationship between high abilities, giftedness and mathematics
- ♦ Classify the neural foundations of mathematics
- ♦ Identify the neural adjacent processes of mathematics
- ♦ Establish the emotional development of the adolescent
- ♦ Understand emotional intelligence applied to adolescents
- ♦ Discover adolescent mathematical development
- ♦ Learn about adolescent mathematical thinking
- ♦ Know what adolescents and students in the classroom are like
- ♦ Gain an understanding of the current educational system , specifically in relation to mathematics

### **Module 10. Gamification in Mathematics**

- ♦ Understand the role of play in childhood
- ♦ Understand the role of play in adolescence
- ♦ Discern between the role of play in childhood and adolescence
- ♦ Learn what gamification in mathematics is
- ♦ Know about the advantages that gamification can bring to the mathematics learning process
- ♦ Learn the different elements of gamification applied to mathematics
- ♦ Know how to use gamification elements to transform a traditional mathematics activity into a gamified mathematics activity
- ♦ Learn to apply gamification to mathematics
- ♦ Know how to extrapolate an example of a gamified mathematical activity to any mathematics content

- ◆ Know how to design a gamified activity with content from the mathematics curriculum
- ◆ Be aware of the different ICT resources related to the gamification of mathematics
- ◆ Learn about the origins of games in humanity
- ◆ Be aware of the different ICT resources for Mathematics Portfolio/ e-Portfolios

### **Module 11. Problem-Based Learning (PBL) in Mathematics**

- ◆ Learn what Problem-Based Learning (PBL) in mathematics is
- ◆ Know the features of PBL in mathematics
- ◆ Learn how to plan a mathematics PBL
- ◆ Learn how to design mathematics PBL
- ◆ Know what the student's role is in mathematics PBL
- ◆ Know what the teacher's role is in mathematics PBL
- ◆ Learn how to assess in mathematics PBL
- ◆ Learn how to design PBL applied to mathematics
- ◆ Know how to extrapolate a PBL example to any content of the mathematics curriculum
- ◆ Be aware of the different ICT resources for mathematics PBL

### **Module 12. Cooperative Learning in Mathematics**

- ◆ Learn how to assess cooperative learning applied to mathematics
- ◆ Learn how to design cooperative learning applied to mathematics
- ◆ Know how to extrapolate a cooperative learning example to any content of the mathematics curriculum
- ◆ Learn what cooperative learning applied to mathematics is
- ◆ Know how to differentiate between cooperative and collaborative work in mathematics
- ◆ Know the objectives of cooperative learning applied to mathematics
- ◆ Know the characteristics of cooperative learning applied to mathematics
- ◆ Explore the Puzzle or jigsaw as a form of cooperative learning applied to mathematics
- ◆ Learn about team-achievement divisions as a type of cooperative learning applied to mathematics

- ◆ Explore the co-op as a type of cooperative learning applied to mathematics
- ◆ Learn about Team-Games-Tournaments as a type of cooperative learning
- ◆ Know how to plan cooperative learning in mathematics
- ◆ Know the different roles that students can have in cooperative learning for mathematics

### **Module 13. Comprehension Projects in Mathematics**

- ◆ Be able to introduce differential learning mathematics
- ◆ Distinguish the characteristics of mathematics learning
- ◆ Understanding cognitive processes in mathematics
- ◆ Know the Metacognitive processes in mathematics
- ◆ Identify the relationship between focused attention and mathematics learning
- ◆ Establish the relationship between sustained attention and mathematics learning
- ◆ Understand the relationship between short-term memory and mathematics learning
- ◆ Discover the role of long-term memory and mathematics learning
- ◆ Learn about language development and mathematics

### **Module 14. Metacognitive Learning and Mathematics**

- ◆ Learn to consider multiple intelligences in the design of different mathematical activities
- ◆ Know what metacognition is in mathematics
- ◆ Know what mathematics learning is
- ◆ Learn about conductism applied to mathematics
- ◆ Learn about cognitivism applied to mathematics
- ◆ Learn about constructivism applied to mathematics
- ◆ Learn to teach how to think to use mathematics
- ◆ Know the different learning strategies applied to mathematics
- ◆ Learn to design applied mathematics activities incorporating metacognitive learning
- ◆ Know the teacher's role in this type of mathematical learning

### Module 15. Designing a Mathematics Teaching Unit

- ♦ Learning to select the factors that comprise a mathematics teaching unit
- ♦ Learn how to create the necessary documentation to work with the students in the mathematics teaching unit
- ♦ Know how to choose the most appropriate learning methodology for the subject and students in order to deliver a mathematics teaching unit
- ♦ Learn how to create the necessary documentation to work with the students in the mathematics teaching unit
- ♦ Know how to create the necessary documentation to assess students upon completion of the mathematics teaching unit
- ♦ Know how to use self-assessment and co-assessment to assess a mathematics teaching unit
- ♦ Know how to use self-assessment and co-assessment to assess a mathematics teaching unit

### Module 16. Teaching Social Sciences

- ♦ Rigorously and precisely select the most appropriate information to include in a presentation
- ♦ Synthesize documents and information on historical, geographic or anthropological phenomena
- ♦ Structure the information to present a complex phenomenon in an analytical, coherent and appropriate manner
- ♦ Understand the facts of the past and know how to contextualize them
- ♦ Understand the confluence of different points of view and opinions on the same historical fact
- ♦ Transmit information acquired about the past in an organized manner
- ♦ Identify and transmit sufficient references and items for spatial orientation
- ♦ Critically interpret graphic representations
- ♦ Understand that cultural facts are the result of a set of different factors

- ♦ Explain the reasons for spatial, cultural and temporal differences between human groups
- ♦ Transmit acquired information about human groups in an organized manner
- ♦ Relate the degree of learning to assessment, self-assessment and hetero-assessment strategies
- ♦ Value the importance of reflecting on the causes that have made it impossible or difficult to acquire new learning
- ♦ Produce effective instructional designs to achieve the desired objectives

### Module 17. Geography and History as Social Sciences

- ♦ Identify geography and history as social sciences
- ♦ See the possible career opportunities and work environments for professionals in social sciences
- ♦ Analyze the fundamental role of geography and history in order to situate their current role in society

### Module 18. The Importance of Teaching Geography and History

- ♦ Interact with the world of social science teaching outside the classroom, knowing the existing possibilities offered by historical, artistic and archaeological museums, as well as art galleries and archaeological sites
- ♦ Identify the different teaching methods to be developed in the classroom to encourage the study of history and geography

### Module 19. Prehistory

- ♦ Understand and analyze what prehistory is
- ♦ Understand and analyze the process of hominization and its relevance today
- ♦ Know the main characteristics of human beings and their ways of life in each of the three stages of prehistory: the Paleolithic, the Neolithic and the Metal Ages
- ♦ Acquire some notions of anthropology and archaeology

- ◆ Discover and analyze the first settlers on the American continent
- ◆ Analyze change and continuity in the different stages of prehistory
- ◆ Develop meaningful learning strategies through the use of concept maps and historical maps
- ◆ Develop oral and social interaction skills through group activities, respecting the contributions of others
- ◆ Value the importance of some prehistoric discoveries and inventions throughout history and human evolution
- ◆ Recognize the richness of this period in history and the importance of preserving it

### Module 20. Ancient History

- ◆ Determine which were the first historical civilizations and locate them on a map
- ◆ Value the role played by the rivers on which the first peoples settled, which triggered political, economic and social changes
- ◆ Analyze and understand the social structures of the first historical civilizations
- ◆ Know and value the cultural and artistic heritage of Mesopotamia and Ancient Egypt
- ◆ Analyze the characteristics of the geographical space that allowed the Greek civilization to expand across the Mediterranean
- ◆ Distinguish and value the historical stages of Ancient Greece and Ancient Rome
- ◆ Compare the different forms of political organization in Ancient Greece
- ◆ Know the main features of religion in Antiquity
- ◆ Understand the significance of the Romanization process and identify its fundamental features
- ◆ Describe, value and know the importance of the Mayan and Olmec civilizations
- ◆ Know, identify and value the importance of the American civilizations in Antiquity

### Module 21. Average Age

- ◆ Identify the historical periods and territories formerly occupied by the Romans, where two medieval Christian cultures developed: Byzantine and Carolingian
- ◆ Recognize Justinian and Charlemagne as the most important figures in their respective empires and both their attempts to restore the ancient Roman Empire
- ◆ Describe the political, economic, social, and cultural features of both cultures
- ◆ Appreciate the importance of the Code of Justinian
- ◆ Rate Charlemagne's efforts to raise the Empire's cultural level
- ◆ Geographically locate and identify the natural features of the Arabian Peninsula
- ◆ Understand the role of Mohammed and Islam in the development of the Arab civilization and describe the phases of Islamic territorial expansion
- ◆ Recognize the political, economic and social features of the Islamic civilization and its legacy
- ◆ Recognize the circumstances that led to the invasion and settlement of Muslims in the Iberian Peninsula Identify the stages of government in Al-Andalus and observe its economic and social features
- ◆ Identify the situation in the Iberian Peninsula from the 11th Century onwards and understand the factors that contributed to the **Reconquista** Know the origin and development of the Christian kingdoms in the Iberian Peninsula
- ◆ Identify instances of peaceful coexistence between Christians, Mudejars and Jews, and differentiate them from times of intolerance and persecution
- ◆ Recognize the irruption of the great Asian civilizations and their influence on the European world
- ◆ Explain the political organization in feudal Europe
- ◆ Distinguish the different dependent relationships between the members of feudal society Define the concept of estates and explain the differentiating features of the estates of the realm or three estates
- ◆ Recognize the influence of the Church on medieval society and identify pilgrimages and crusades

- ◆ Identify the advances in agriculture, commerce and craftsmanship as the causes that favored the urban renaissance and the rise of the bourgeoisie
- ◆ Explain the circumstances that led to the end of the Middle Ages and the beginning of the Modern Age
- ◆ Distinguish the features of the different artistic styles that developed during the Middle Ages
- ◆ Elaborate and/or interpret maps and timelines

### Module 22. Europe in the Modern Age

- ◆ Know the defining features of modern states
- ◆ Differentiate the variety of European political forms
- ◆ Recognize the aesthetic conceptions and essential features of Renaissance art, as well as some artists and their works
- ◆ Know the features of humanism and some authors and their works
- ◆ Geographically locate the different pre-Columbian cultures in America and define their essential features, as a reality prior to the arrival of the Spanish
- ◆ Analyze and identify the causes of the discovery of America
- ◆ Understand the processes of conquest and colonization during the Modern Age
- ◆ Explain the origin and religious and political consequences of religious fragmentation in Europe
- ◆ Identify the differences between Protestant denominations
- ◆ Understand the Catholic Reformation or Counter-Reformation
- ◆ Recognize the political, social and economic features of Spanish America
- ◆ Analyze the relations between the European kingdoms that led to the Thirty Years' War
- ◆ Distinguish the features of absolutist and parliamentary regimes
- ◆ Recognize the essential characteristics of Baroque art and some of its authors and works, as well as its importance in Europe and America
- ◆ Understand the scope and importance of the Enlightenment as an intellectual movement in Ancient Regime's society

- ◆ Understand enlightened absolutism and its essential features
- ◆ Identify the Bourbon reforms in America
- ◆ Observe and relate Modern Age works of art to their political, social, economic and religious context
- ◆ Know how to analyze historical texts, maps and images

### Module 23. The Late Modern Period

- ◆ Explain the political, social and economic features of the Ancient Regime
- ◆ Know what advances resulted from the Scientific Revolution in the 17-18th centuries
- ◆ Explain the political, social and economic features of the Ancient Regime
- ◆ Understand the scope of the Enlightenment as a new cultural and social movement in Europe and America
- ◆ Identify the main events of the bourgeois revolutions in the United States, France, Spain and Latin America
- ◆ Understand the scope and limitations of the revolutionary processes that took place in the 18th century Identify the main events of the liberal revolutions in Europe and America Verify the scope and limitations of the revolutionary processes that took place in first half of the 19th century
- ◆ Describe the relevant events of the Industrial Revolution and their causal sequence
- ◆ Identify imperialist powers and the economic and political power distribution in the world in the last quarter of the 19th century and the beginning of the 20th
- ◆ Establish causal hierarchies (aspect, time scale) of the development of imperialism
- ◆ Know the main scientific and technological advances that took place in the 19th century as a consequence of the industrial revolutions
- ◆ Know the main events of the Great War, its interconnections with the Russian Revolution and the consequences of the Treaties of Versailles
- ◆ Know and understand the most important events, milestones and processes of the interwar period and the 1920s and 1930s, especially in Europe
- ◆ Analyze the events that led to the rise of fascism in Europe
- ◆ Know the main events that took place during the Second World War



- ◆ Understand the concept of “total war”
- ◆ Differentiate the geographic scales of the war: Europe and the world
- ◆ Understand the context in which the Holocaust unfolded and its consequences
- ◆ Organize the most important events of post-war decolonization in the 20th century
- ◆ Understand the limits of decolonization and independence in an unequal world
- ◆ Understand the economic advances of the Soviet regimes and the dangers of their internal isolation, as well as the economic advances of the Welfare State in Europe
- ◆ Understand the concept of “cold war” in the post-1945 context, and the relations between the two blocs, the USA and the USSR
- ◆ Understand the creation and development of the European Union

#### **Module 24. Physical Geography**

- ◆ Ensure a general and integrated program on the fundamental contents of the various thematic areas in geography, its epistemological development and research methods
- ◆ Enable the application of theoretical, methodological and instrumental knowledge to the integrated analysis and interpretation of spatial processes and problems, and elaborate territorial diagnoses
- ◆ Develop specific skills related to working techniques, especially those related to the acquisition, analysis, treatment and representation of geographic information, including field work
- ◆ Ensure the necessary knowledge to teach geography in high school, in accordance with the complementary training that may be legally established or required
- ◆ Lay the foundations for further postgraduate studies that involve an important territorial component, whether specialized or transdisciplinary
- ◆ Identify the elements in the physical environment, and describe and characterize the main natural environments and their distribution Analyze the use of resources by social groups and assess environmental consequences
- ◆ Describe geographic areas and point out their features
- ◆ Know the geographic diversity of the world and its basic physical features

#### **Module 25. Human Geography**

- ◆ Analyze and understand human geography as a discipline that studies the relation between society and physical space Study population dynamics and distribution throughout history
- ◆ Explain migrations and immigrations, how they have affected the world economy and space
- ◆ Understand rural areas and their economic activities (livestock, agriculture, etc.)
- ◆ Analyze the depopulation that rural areas have suffered and the problems and consequences it entails
- ◆ Study the morphology of urban spaces Understand their structure, layout, importance and development in history
- ◆ Know the history of transportation and its impact on the global economy
- ◆ Explain global transportation networks How they are configured, and the features of each network
- ◆ Understand the problems generated as a consequence of transportation systems
- ◆ Study locations and economic problems over time in different regions Study economic factors produced by the economy
- ◆ Analyze the organization of a State according to history and from a political standpoint
- ◆ Determine and interpret the political-administrative structure of a State
- ◆ Explain the nature of organized civil society
- ◆ Explain the nature of a Local Agenda 21 process and how to develop it
- ◆ Understand what citizen participation consists of: Create an association
- ◆ Know and study global tourism and its importance to a country's economy
- ◆ Analyze the different types of tourism that exist
- ◆ Conduct a SWOT analysis of a specific tourist destination
- ◆ Develop diagrams and elaborate geographic maps that explain the natural human-nature relationship
- ◆ Learn how to use the different tools that exist to explain geography through the use of GIS

### **Module 26. Art History Within the Social Sciences**

- ♦ Analyze and critically evaluate the curriculum of Social Sciences and Art History in the regulations of High School
- ♦ Identify the role of art and its historical contribution to the social sciences
- ♦ Analyze the different manifestations of art that marked the past decades

### **Module 27. The Importance of Teaching in Art History**

- ♦ Identify the different methods and techniques of teaching art
- ♦ Analyze the different teaching methodologies of artistic currents
- ♦ Study in depth new techniques for teaching art and its impact on modern culture
- ♦ Prepare the future Art History teacher to make decisions, organize them and put them into practice, about the historical knowledge to be taught in a classroom, in a given center
- ♦ Know teaching resources (timelines, historical documents, historical maps, Web pages with didactic resources, Webquest, art galleries, etc.) and analyze their didactic use

### **Module 28. Music Didactics**

- ♦ Explore the possible routes towards the achievement of a quality music education
- ♦ Interpret the different pedagogical models of musical learning
- ♦ Justify current music teaching methodologies
- ♦ Discuss the consideration of learning styles and their repercussion on the different educational stages
- ♦ Propose concrete lines of action for musical practice
- ♦ Review educational practices
- ♦ Describe the advantages of playing with music and motor activity in the learning process

### **Module 29. Material Resources for Music Education**

- ♦ Understand the structure of the educational system and how music-related educational projects and plans are developed
- ♦ Get to know practical cases of music learning
- ♦ Analyze the importance of learning styles in music students
- ♦ Analyze the different models that explain learning styles
- ♦ Plan educational actions and precise orientations to favor the development of each learning style

### **Module 30. Instrumentation for Music Education**

- ♦ Apply instruments and tools in musical learning
- ♦ Get to know in a technical way the existing instruments in the classroom
- ♦ Understand the aspects of instrumentation, before and after J.S. Bach
- ♦ Master the techniques of attack and expressiveness in the melodic function

### **Module 31. History of Musical Learning**

- ♦ Analyze the historical background and the evolution of musical learning
- ♦ Compare the evolution of the concept of music teaching in the international framework
- ♦ Critique the different currents of music learning
- ♦ Critique myths and false beliefs of music teaching
- ♦ Critique reference manuals and their applicability to the field of music teaching
- ♦ Analyze music as a tool for conflict resolution
- ♦ Share the educational challenges of the present and the objectives of a school in the 21st century

**Module 32. Evaluation of Music Students**

- ♦ Identify successful educational experiences based on the analysis of cases
- ♦ Master the existing evaluation instruments and tools
- ♦ Propose the items to be evaluated in the musical area
- ♦ Understand the importance of debate in the educational process

**Module 33. Current Methods**

- ♦ Identify the importance of art and its currents in history and its repercussions in history
- ♦ Develop in depth the artistic concepts rooted in history
- ♦ Learn more about the different methodological currents that have emerged throughout history

**Module 34. Student Motivation**

- ♦ Delve into student motivation and teacher roles in this task, for which diverse cognitive theories must be introduced
- ♦ Have an impact on the motivation of adolescents specifically, getting to know them and being able to mediate in class conflicts
- ♦ Provide methodological tools so the teachers that enroll in the program can motivate students

**Module 35. Adapting to Different Classroom Situations and Multiple Intelligences**

- ♦ Obtain tools to face school maladjustment and to know how to deal with teaching high capacity students
- ♦ Prepare teachers to adapt to different classroom situations, with emphasis on adolescence and knowledge of multiple intelligences

**Module 36. ICT**

- ♦ Develop teachers' knowledge of ICT by showing them their application and introducing them to the development of teaching materials based on new technologies
- ♦ Teach critical appraisal of the use of ICTs in order to protect students in the judicious use of new technologies

**Module 37. Educational Programming**

- ♦ Instruct in the development of a didactic program in detail according to current standards, using examples
- ♦ Develop new techniques for knowledge acquisition for secondary and high school students. Develop new knowledge acquisition techniques for high school students

**Module 38. Assessment**

- ♦ Delve into assessments, showing the objectives it should have, the criteria to be followed, the existing models, its importance and its relation to the education law LOMCE
- ♦ Know the different perspectives on assessments through different authors

**Module 39. Teaching Outside the Classroom**

- ♦ Identify the tools that influence knowledge acquisition outside the classroom
- ♦ Analyze the various techniques for autonomous education outside the classroom

# 03 Skills

This programme explores various competencies, such as educational assessment, the use of Information and Communication Technologies (ICT) in the classroom, student motivation and the knowledge and application of different methodological trends. Through a combination of theoretical and practical approaches, participants will be able to acquire the skills necessary to improve their teaching practice and make a positive impact on their students' learning.





“

*Learn how to design and implement effective educational assessment strategies that allow you to measure the progress and performance of your students and identify key areas for improvement"*



## General Skills

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- ◆ Possess and understand knowledge that provides a basis or opportunity to be original in the development and/or application of ideas, often in a research context
- ◆ Apply the knowledge acquired in a practical way, with a good theoretical basis, to solve any problem that arises in the work environment, adapting to new challenges related to their area of study
- ◆ Integrate the knowledge gained in the program with previous knowledge, and reflect upon the implications for professional practice, applying personal values, thereby improving the quality of the service provided
- ◆ Know how to apply acquired knowledge and problem-solving skills in new or unfamiliar environments within broader (or multidisciplinary) contexts related to the field of study
- ◆ Understand the value of social sciences and how they can be put into practice in academic life
- ◆ Focus on the use of ICT, indispensable tools today, which require teachers to be constantly updated
- ◆ Master language, as it is the fundamental vehicle for human communication and its good use
- ◆ Acquire the learning skills that will enable them to continue studying in a manner that will be largely self-directed or autonomous





## Specific Skills

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- ♦ Reflect on the foundations of language teaching and its contextualisation in the field of teaching young people, emphasising the different linguistic approaches
- ♦ Consider the basic aspects of teaching lexicon and semantics, how to acquire them and learn them for subsequent practical application in the production and creation of text. Also, show the benefits of productive learning and discuss what traits the speaker should have in the communicative context
- ♦ Present the practical application of grammatical and literary knowledge acquired throughout the teaching-learning process and indicate the need for teaching oral, written and textual expression in order to develop full communicative skills and competences in adulthood
- ♦ Be able to integrate innovative methodology with the curricular content, adapting these contents to student needs
- ♦ Develop self-learning skills, so as to enable continuous professional development on new innovative methodologies to be applied in mathematics classrooms
- ♦ Know how to use multiple intelligences as a fundamental tool for attention of diversity in the classroom during the mathematics learning process
- ♦ Rigorously and precisely select the most appropriate information to include in a presentation
- ♦ Synthesize documents and information on historical, geographic or anthropological phenomena
- ♦ Structure the information to present a complex phenomenon in an analytical, coherent and appropriate manner
- ♦ Understand the facts of the past and know how to contextualize them
- ♦ Delve into the categorization of geography
- ♦ Develop methodological resources to apply them in the classroom
- ♦ Apply teaching methodology to the social sciences
- ♦ Assuming proposals and self-regulating one's own learning process
- ♦ Analyze the structure of cooperative learning
- ♦ Justify the need for both teachers and students to advance in digital expertise
- ♦ Discuss the advantages and disadvantages of the transformation of education with new methods and technological tools
- ♦ Propose activities and strategies to implement arts education as a backbone element parallel to other educational areas
- ♦ Elaborate a base of technological resources that can be used for educational practice
- ♦ Compare digital resources and share experiences in order to compile a resource bank
- ♦ Contribute personal experiences, knowledge and work that help to consolidate and transfer what has been learned

# 04

# Course Management

The teaching staff of the Advanced Master's Degree in Didactics and Teaching Practice in Secondary Education is made up of renowned professionals in the field of education, with extensive experience in teaching and the creation of high quality academic plans. The experts who are part of this programme bring their knowledge and experience in different areas of education, providing participants with high-level teaching that is based on the reality of current teaching practice.







“

*You will broaden your educational perspective and enrich your teaching practice thanks to the experience and knowledge provided by the management of this programme"*

## Management



### Dr. Arroyo Fernández, Alejandro

- ◆ Teacher and expert in Spanish language and culture at the Instituto Cervantes
- ◆ Spanish Teacher Instituto Cervantes
- ◆ Spanish Teacher Volkshochschule VHS Köln, Alemania
- ◆ Spanish Teacher Volkshochschule Frechen, Alemania
- ◆ Spanish Teacher Christian-Albrechts-Universität zu Kiel, Alemania
- ◆ Contributor to digital magazines of literary criticism and teacher of Spanish as a Foreign Language In Spain BORRAR
- ◆ PhD in Literary Studies, American Literature. Complutense University of Madrid
- ◆ Degree in English Philology
- ◆ Specialist in Contemporary North American Literature and Victorian Literature
- ◆ Master's Degree in European Literary Studies Master's Degree in Teaching Spanish as a Foreign Language



### Mr. Jurado Blanco, Juan

- ◆ Secondary School Teacher with expertise in Industrial Electronics
- ◆ Mathematics teacher in Compulsory Secondary Education at Santa Teresa de Jesús School in Vilanova i la Geltrú
- ◆ Expert in High Abilities
- ◆ Industrial Technical Engineer, specializing in Industrial Electronics



### **Ms. Jiménez Romero, Yolanda**

- ◆ Pedagogical advisor and external educational collaborator
- ◆ Academic Coordinator Online University Campus
- ◆ Territorial Director of the Extremeño-Castilla La Mancha Institute of High Abilities
- ◆ Creation of Educational Contents INTEF. Ministry of Education and Science
- ◆ Degree in Primary Education, English specialization
- ◆ Psychopedagogy. International University of Valencia
- ◆ Master's Degree in Neuropsychology of High Abilities
- ◆ Master's Degree in Emotional Intelligence. Specialist in NPL



### **Mr. Linares Tablero, Pedro**

- ◆ Coordinator of the Family Accompaniment Centre of the Edith Stein School
- ◆ Coordinator of the Family Accompaniment Centre of the Edith Stein School
- ◆ Head of Studies, in charge of New Technologies and Academic Organization at Edith Stein School
- ◆ Principal of Chesterton School
- ◆ Principal of Villamadrid School
- ◆ Degree in Philosophy and Educational Sciences from the Complutense University of Madrid
- ◆ Postgraduate Diploma in Flipped Classroom in the Classroom by CEU Cardenal Herrera University



### **Dr. Cañestro Donoso, Alejandro**

- ◆ Researcher and lecturer in Art History
- ◆ Expert researcher in Sumptuary Arts
- ◆ Author of several books on Art History
- ◆ University lecturer in art history studies
- ◆ PhD in Art History, University of Murcia



### **Dr. Atencia Micó, Óscar**

- ◆ Director of the Valencian Institute of Far High-Capacity Individuals
- ◆ Director of the Valencian Institute of Far High-Capacity Individuals
- ◆ Teacher at the Higher Institute of Social and Socio-Sanitary Studies
- ◆ Master's Degree in Direction and Management of Educational Centers by the University of Valencia
- ◆ Master's Degree in Direction and Management of Gerontological Centers by the UNED (UNED)
- ◆ Degree in Pedagogy from the University of Valencia

## Professors

### Ms. Azcunaga Hernández, Amaia

- ◆ Specialist in Language Interpreting and Translation
- ◆ Member of the International Services team. McKinsey & Company, Poland
- ◆ Teacher of Foreign Languages with teaching experience in various countries and educational fields
- ◆ Degree, Language Interpreting and Translation. UPV
- ◆ Master's Degree in Teaching Spanish as a Foreign Language
- ◆ Specialist in group dynamics applied to teaching

### Mr. Velasco Rico, Guillermo

- ◆ DELE examiner and creative writer
- ◆ Spanish Teacher Just Spanish
- ◆ Contributor. Burgos Newspaper
- ◆ Spanish Teacher at the Complutense University of Madrid
- ◆ Content Designer Deliberate Spanish
- ◆ Academic Coordinator of the Center for Hispanic Studies in Sarajevo
- ◆ University chair. Spanish Agency for International Development Cooperation - AECID
- ◆ Degree in Hispanic Philology from the Complutense University of Madrid
- ◆ Master's Degree in SFL, Complutense University of Madrid
- ◆ Certified by the Instituto Cervantes as a DELE Examiner

### Mr. Gris Ramos, Alejandro

- ◆ Technical Engineer in Computer Management
- ◆ CEO & Founder Club de Talentos
- ◆ CEO. Persatrace, Online Marketing Agency
- ◆ Business Development Director at Alenda Golf
- ◆ Director of the IP Studies Centre
- ◆ Head of Web Application Engineering Department at Brilogic
- ◆ Web programmer at Grupo Ibergest
- ◆ Software/web programmer at Reebok Spain
- ◆ Technical Engineer in Computer Management
- ◆ Master's Degree in Digital Teaching and Learning Tech Education
- ◆ Master's Degree in High Abilities and Inclusive Education
- ◆ Master' s Degree in E-Commerce
- ◆ Specialist in the latest technologies applied to teaching, digital marketing, web application development and Internet business

### Ms. Mejías, María José

- ◆ Teacher from Primary Education, Jaby School
- ◆ Early Childhood Educator at Mi Pequeño Mundo Nursery School
- ◆ Graduate in Early Childhood Education from Camilo José Cela University
- ◆ Graduate in Primary Education Teaching Degree from Camilo José Cela University
- ◆ Master's Degree in Educational Center Management and Administration

**Ms. Puertas Yáñez, Amaya**

- ♦ Primary School Teacher
- ♦ Bilingualism and Internationalization Coordinator at JABY College
- ♦ Member of SUCAM (University Sub-network of Learning Communities of Madrid)
- ♦ Bachelor's Degree in Information Sciences (UCM)
- ♦ Postgraduate Diploma in English as a Foreign Language (UAM)
- ♦ Master's Degree in Bilingual Education (UAH)
- ♦ Professional Master's Degree in Attention to SEN in Pre-school and Primary Education

**Mr. Alcocer Martín, Daniel**

- ♦ Real Estate Advisory Partner. RE/MAX. Montepíncipe
- ♦ Head of Humanities Department at the Colegio Concertado
- ♦ Secondary Education Teacher at IES El Burgo de las Rozas
- ♦ Degree in History from the Complutense University of Madrid
- ♦ Specialist in International Relations, Security and Defence from the Complutense University of Madrid
- ♦ Master's Degree in Bioethics from the Universidad Rey Juan Carlos

**Dr. García Casasepère, José Antonio**

- ♦ Secondary School teacher expert in Opera
- ♦ Teacher of Spanish at High School Pare Arques
- ♦ Co-author of La ópera de Valencia
- ♦ Doctor from the University of Valencia

**Dr. De la Serna, Juan Moisés**

- ♦ Psychologist and Writer expert in Neurosciences
- ♦ Writer specializing in Psychology and Neurosciences
- ♦ Author of the Open Chair in Psychology and Neurosciences
- ♦ Scientific disseminator
- ♦ PhD in Psychology
- ♦ Degree in Psychology. University of Seville
- ♦ Master's Degree in Neurosciences and Behavioral Biology Pablo de Olavide University, Seville
- ♦ Expert in Teaching Methodology. La Salle University
- ♦ University Specialist in Clinical Hypnosis, Hypnotherapy. National University of Distance Education - UNED
- ♦ Diploma in Social Graduate, Human Resources Management, Personnel Administration. University of Seville
- ♦ Expert in Project Management, Administration and Business Management. Federation of Services U.G.T
- ♦ Trainer of Trainers. Official College of Psychologists of Andalusia

**Sra. Igual Pérez, María José**

- ♦ Professional Conservatory of Music of Alicante "Guitarrista José Tomás"
- ♦ Professor of Violin

**Sr. Palacios, Francisco**

- ♦ Pedagogue of musical education, collaborating teacher in Master's Degree in Music Education

**Ms. Sánchez García, Manuela**

- ◆ Compulsory Secondary Education Professor
- ◆ Mathematics teacher in Compulsory Secondary Education at Santa Teresa of Jesus in Vilanova i la Geltrú
- ◆ Vocational Training and Language Teaching
- ◆ Health Biology Specialty
- ◆ Master's Degree in Teacher Training for Compulsory Secondary and High School Education
- ◆ Degree in Biology

**Mr. Guerrero Cuesta, Daniel**

- ◆ Speciality in Contemporary American History
- ◆ University Professor and Researcher
- ◆ PhD in the Department of History of America I of the Faculty of Geography and History of the UCM
- ◆ Degree in History, Complutense University of Madrid
- ◆ Speciality in Contemporary American History
- ◆ Master's Degree in American History and Anthropology
- ◆ Master's Degree in High School Teacher Education

**Mr. Lecuona Font, Enrique**

- ◆ Specialist in Geography and Urban Law
- ◆ Researcher
- ◆ Monitor of extracurricular sports activities. Hispano Inglés School Santa Cruz de Tenerife
- ◆ Research professor of the associationism in the Canary Islands by the ULL
- ◆ Degree in Geography, University of La Laguna
- ◆ CAP (Certificate of Professional Aptitude in Spain), Alfonso X El Sabio University
- ◆ Master's Degree in Urban Law, University of La Laguna

**Mr. Reig Ruiz, Pedro**

- ◆ Research Professor
- ◆ Geography and History Teacher, Nazaret Oporto School, Madrid
- ◆ Professor at IES Salvador Dalí
- ◆ Researcher at the University of Alcalá
- ◆ Writer at SegurCaixa Adeslas
- ◆ Degree in History, Complutense University of Madrid
- ◆ Master's Degree in Teacher Training for ESO and Bachillerato by the Complutense University of Madrid
- ◆ Master's Degree in History of the Hispanic Monarchy, Complutense University of Madrid

**Mr. Rodríguez Rodríguez, José Javier**

- ♦ Geography and History Teacher, Sagrada Familia School in Moratalaz
- ♦ Teacher Specialist in the Teaching Spanish as a Foreign Language endorsed by IL3 Universitat de Barcelona
- ♦ Multidisciplinary lecturer in countries such as Chile and the United Kingdom
- ♦ Degree in History from the University of Alcalá de Henares
- ♦ Master's Degree in Teacher Training in ESO and Bachillerato in the Specialities of
- ♦ Geography and History, University of Alcala

**Ms. Domínguez Alonso, Lourdes**

- ♦ Teacher of History and Geography for Secondary and Baccaulaureate
- ♦ Teacher of History and Geography in a public secondary school
- ♦ Teacher of English and Spanish for foreigners support classes
- ♦ Private teacher at GoStudent
- ♦ Graduate in History, University of Alicante
- ♦ Master's Degree in Compulsory High School Teaching

**Ms. Villegas Puerto, Ana**

- ♦ Member of the Gabriel y Galán High School
- ♦ High school teacher at Gabriel Galán High School
- ♦ Co-author of the work "Econews: el telediario como herramienta didáctica" and winner of the first prize in the category of A More Civic and Solidarity School

**Mr. Notario Pardo, Francisco**

- ♦ Family and School Mediator, and Official Court Expert
- ♦ Supervising Official of the Department in Generalitat Valenciana
- ♦ Social Educator of the Intervention Team of Basic Primary Care of Social Services
- ♦ Official Judicial Expert in Family Courts and Juvenile Prosecutor's Office
- ♦ Interim Social Educator in Generalitat Valenciana
- ♦ Intervention Technician in Foster Care for the Trama Centre Association
- ♦ Coordinator of Foster Care Intervention Center in Alicante
- ♦ Director of the Master's Degree in Inclusive in Education for Children in Social Risk Situations
- ♦ Degree in Pedagogy from the University of Valencia
- ♦ Postgraduate Certificate in Social Educational at of Valencia University
- ♦ Diploma in Intervention with Families at Risk and Minors with Antisocial Behaviour from the University of Valencia
- ♦ Specialisation in Intervention and Therapeutics in Special Educational Needs and Socio-educational Needs by the Official College of Pedagogues and Psychopedagogues of the Valencian Community
- ♦ Official College of Pedagogues and Psychopedagogues of the Valencian Community
- ♦ Teacher of Vocational Training for Employment by the Servef Centre
- ♦ Postgraduate Certificate's Degree in Family and School Catholic University of Valencia San Vicente Mártir
- ♦ University Expert in Social Inclusion and Inclusive Education by CEU Cardenal Herrera University
- ♦ Expert in Intervention with at-risk families and children with antisocial behavior



**Dr. Mira Tomás, Josep**

- ♦ Web Developer at inaCátalog Mobility Sales
- ♦ SQA June Developer at Imaweb
- ♦ ERP & Web Management at Madrid Musical SA
- ♦ Creative producer at NOIIZ LTD
- ♦ Freelance Multimedia Music Composer
- ♦ Music Composer Degree at Conservatory
- ♦ Master's Degree in Music Technology at Katarina Gurska
- ♦ Higher Degree in Multiplatform Applications Development at Florida Universitaria
- ♦ Degree in Composition and Music Theory at Musikene

**Ms. Moya Pastor, Maria Luisa**

- ♦ Violinist and Violin Music Teaching Pedagogue
- ♦ Violinist and Freelance Violin Teacher
- ♦ Violin teacher at the Conservatory Mestre Feliu de Benicarló in Valencia
- ♦ Violin Teacher at Musicalis Academy
- ♦ Degree in Violin from the Joaquin Rodrigo Higher Conservatory of Music in Valencia
- ♦ Master's Degree in Digital Education E-learning and Social Networks at TECH Technological University in Valencia
- ♦ Master's Degree in Violin Specialization at the Liège Conservatory of Music
- ♦ Master's Degree in Violin Pedagogy at the Liège Conservatory of Music
- ♦ Master's Degree in Music Research at the UNIR

**Ms. Gisbert Caudeli, Vicenta**

- ♦ Secretary of the Center of University Studies for the Education in Diversity at the University of La Laguna
- ♦ Assistant Professor at the Interfaculty Department of Music of the Faculty of Teacher Training and Education of the Autonomous University of Madrid
- ♦ Director, coordinator and teacher of the MUSINNOVA Music Education Project
- ♦ Academic Director of the Master's Degree in Music Pedagogy at UNIR
- ♦ Reviewer of Review of European Studies (Canada)
- ♦ Member of IMETIC, GIED and GIMB
- ♦ Doctor Cum Laude in Educational Sciences from the University of La Laguna
- ♦ Master's Degree in Neurosciences for Teachers from CEU Cardenal Herrera University
- ♦ Accredited as Hired Doctor by the National Agency for Quality Assessment and Accreditation (ANECA) and by the Canarian Agency for Educational Evaluation (ACCUEE)
- ♦ Member of: SEM-EE, ISME, IGEB

# 05

## Structure and Content

The Advanced Master's Degree in Didactics and Teaching Practice in Secondary Education is structured in different modules that comprehensively address the main aspects of secondary education. Each module is carefully designed, with an up-to-date pedagogical approach based on best educational practices. In addition, the programme includes complementary readings and high quality multimedia material that enrich the teaching of the participants, offering resources and tools that allow them to deepen their learning and apply them in their teaching practice.



“

*Gain a holistic and up-to-date view of teaching in Secondary Education, having a reference guide that will remain useful even after the end of the programme”*

## Module 1. Education and Development

- 1.1. Language and the Brain
  - 1.1.1. Brain and Language
  - 1.1.2. Communicative Processes of the Brain
  - 1.1.3. The Brain and Speech. Acquisition and Development of Language and Communication
- 1.2. Psycholinguistics
  - 1.2.1. Scientific Framework of Psycholinguistics
  - 1.2.2. Objectives of Psycholinguistics
  - 1.2.3. Language Processing System
  - 1.2.4. Theories on the Development of Language Learning
  - 1.2.5. The Information Processing System
    - 1.2.5.1. Levels of Processing
  - 1.2.6. Functional Architecture of the Language Processing System. Fodor's Modularist Position
- 1.3. Language Development vs. Neural Development
  - 1.3.1. Genetics and Language
    - 1.3.1.1. FOXP2 (Forkhead Box P2)
  - 1.3.2. Neurological Foundations of Language
  - 1.3.3. Developmental Dyslexia
  - 1.3.4. Specific Language Disorder (SLD)
- 1.4. Spoken Language and Written Language
  - 1.4.1. Language
  - 1.4.2. Comprehensive Language
  - 1.4.3. Spoken Language
  - 1.4.4. Reading Language
  - 1.4.5. Dyslexia
  - 1.4.6. Written Language
  - 1.4.7. Dysgraphia
- 1.5. Bilingual Brain
  - 1.5.1. Concept of Bilingualism
  - 1.5.2. Bilingual Brain
  - 1.5.3. Critical and Sensitive Periods
  - 1.5.4. Positive and Negative Effects of Bilingualism
  - 1.5.5. Brain of the Early Bilingual vs. Late Bilingual
  - 1.5.6. Changes in Neural Circuits in Bilingual Brains
  - 1.5.7. Learning Factors in the Acquisition of One or More Languages
    - 1.5.7.1. Window of Opportunity
    - 1.5.7.2. Aptitude
    - 1.5.7.3. Motivation
    - 1.5.7.4. Strategy
    - 1.5.7.5. Consistency
    - 1.5.7.6. Opportunity and Support
    - 1.5.7.7. Linguistic Relationship Between Languages
    - 1.5.7.8. Siblings
    - 1.5.7.9. Gender
    - 1.5.7.10. Right or Left-Handedness
  - 1.5.8. Bilingualism. Cognitive and Executive Functions
- 1.6. Speech and Language Development Disorders
  - 1.6.1. The Architecture of the Mind
  - 1.6.2. Language
    - 1.6.2.1. Language Development
  - 1.6.3. Communication Disorders
  - 1.6.4. Specific Speech and Language Development Disorders
    - 1.6.4.1. Specific Language Development Disorder
    - 1.6.4.2. Speech Development Disorders
- 1.7. Childhood Language Development
  - 1.7.1. Childhood Language Development
    - 1.7.1.1. Language Components
  - 1.7.2. Errors in Language Development
    - 1.7.2.1. Errors in the Content or Semantic Component
    - 1.7.2.2. Errors in the Form Component
  - 1.7.3. Communicative Contexts
  - 1.7.4. The Influence of Context and Interaction on Language Development
  - 1.7.5. The Relationship Between Gestures and Language Development
- 1.8. Adolescent Brain
  - 1.8.1. Adolescent Brain Mechanisms of Maturing
  - 1.8.2. Studies on the Adolescent Brain
  - 1.8.3. Neurosciences and Adolescence



## Module 2. The Reality of the Classroom

- 2.1. The Educational System as a social system
  - 2.1.1. Educational System: definition and characteristics
  - 2.1.2. Educational system: Components
  - 2.1.3. Aims and principles of Education
  - 2.1.4. Decentralization of Powers
  - 2.1.5. Structure of the Center: Organs
  - 2.1.6. Structure of the Center: Documents
  - 2.1.7. Tutorial
  - 2.1.8. Center Coordination
  - 2.1.9. Intersection between Family Environment and School Education
  - 2.1.10. Parental Involvement
- 2.2. The Classroom as a Place of Learning
  - 2.2.1. Natural Learning
  - 2.2.2. Learning in the Classroom
  - 2.2.3. Active Participants
  - 2.2.4. Teaching Work
  - 2.2.5. Learning Processes
  - 2.2.6. Environmental Factors
  - 2.2.7. Principles of Arrangement
  - 2.2.8. Types of Grouping
  - 2.2.9. Corner Work
  - 2.2.10. Didactic Exploitation of the Corners
- 2.3. Building Learning
  - 2.3.1. Building Learning through Interaction
  - 2.3.2. Peer-to-peer Interactivity
  - 2.3.3. Interactivity with Adults
  - 2.3.4. Exploration and Research
  - 2.3.5. Creativity
  - 2.3.6. Play
  - 2.3.7. Psychomotor Skills
  - 2.3.8. Moving in Class
  - 2.3.9. The Affective Dimension
  - 2.3.10. Working with Emotions

- 2.4. The Facilitating Teacher
  - 2.4.1. Teacher Profile
  - 2.4.2. Types of Teachers
  - 2.4.3. Functions of the Teacher Facilitator
  - 2.4.4. Effective Teaching
  - 2.4.5. Conceptual Competence: Knowing
  - 2.4.6. Procedural Competence: Know-how
  - 2.4.7. Attitudinal Competence: Knowing How To Be
  - 2.4.8. Teaching Collaboration
  - 2.4.9. Cases of Collaboration
  - 2.4.10. Obstacles to Collaboration
- 2.5. The Teacher in the Classroom
  - 2.5.1. Teaching Styles
  - 2.5.2. Classification of Styles
  - 2.5.3. Teachers' Expectations
  - 2.5.4. Communicating Expectations
  - 2.5.5. Strategies for Action
  - 2.5.6. Attention to Diversity
  - 2.5.7. Types of Diversity
  - 2.5.8. Inclusive Education Practices
  - 2.5.9. Space Management
  - 2.5.10. Time Mngement
- 2.6. Learning to Learn
  - 2.6.1. Learning Today
  - 2.6.2. Intelligence vs. Intelligences
  - 2.6.3. Typology of Intelligences
  - 2.6.4. Implications of MI in the Classroom
  - 2.6.5. Learning Styles: Definition
  - 2.6.6. Learning Styles: Types
  - 2.6.7. Implications of AEs in the Classroom
  - 2.6.8. Learning Strategies
  - 2.6.9. Teaching Learning Strategies
  - 2.6.10. Self-regulated Learning
- 2.7. The Learner
  - 2.7.1. Hierarchy of Needs
  - 2.7.2. Security/Safety
  - 2.7.3. Love, Belonging, and Recognition
  - 2.7.4. Self-realization
  - 2.7.5. Motivation
  - 2.7.6. Measuring Motivation
  - 2.7.7. Motivational Strategies in the Classroom
  - 2.7.8. Special Educational Needs
  - 2.7.9. Typology of Needs
  - 2.7.10. Action Protocol
- 2.8. The Group
  - 2.8.1. Considerations
  - 2.8.2. What is a Group?
  - 2.8.3. Characteristics of a Group
  - 2.8.4. Group Dynamics
  - 2.8.5. Cohesion
  - 2.8.6. Rules and Objectives
  - 2.8.7. Life Development
  - 2.8.8. Good Practices
  - 2.8.9. Cooperative Learning
  - 2.8.10. Cooperative Activities
- 2.9. Classroom Management
  - 2.9.1. The Three Pillars
  - 2.9.2. Basic Premises
  - 2.9.3. The First Days of Class in Infant School
  - 2.9.4. The First Days of Class in Primary School
  - 2.9.5. Initial Strategies
  - 2.9.6. Learning Environment
  - 2.9.7. Control Objectives
  - 2.9.8. Authority Style
  - 2.9.9. General Control Strategies
  - 2.9.10. Control Tools

- 2.10. Performance and Behavioral Problems
  - 2.10.1. Performance Problems: Identification and Management Strategies
  - 2.10.2. Behavioral Problems: Identification and Management Strategies

### Module 3. The Fundamentals of Teaching Language and Literature

- 3.1. Teaching Language and Literature
  - 3.1.1. Introduction to the Concept of Teaching
  - 3.1.2. Teaching Language
  - 3.1.3. Teaching Literature
  - 3.1.4. Teaching from a Cultural Perspective
- 3.2. The Language and Literature Syllabus
  - 3.2.1. Definition of the Concept of a Syllabus
  - 3.2.2. The Elements and Parts of the Syllabus
  - 3.2.3. The Syllabus of Language and Literature in Primary Education. Primary
  - 3.2.4. The Language and Literature Syllabus in High School Education
- 3.3. Oral Language Teaching
  - 3.3.1. Elements of Oral Proficiency
  - 3.3.2. Characteristics of Oral Language
  - 3.3.3. Teaching Oral Communication
  - 3.3.4. Teaching Proposals
- 3.4. Teaching Written Language
  - 3.4.1. Definition of the Concept of Written Language
  - 3.4.2. Key Elements in Teaching Written Language
  - 3.4.3. ICT in Teaching Language
  - 3.4.4. Written Language Evaluation
- 3.5. Teaching Reading
  - 3.5.1. Analysis of the Concept of Teaching Reading
  - 3.5.2. Development and Characteristics of the Reading Process in Primary Education
  - 3.5.3. The Promotion of Reading in the Educational Stage
  - 3.5.4. Practical Applications of Teaching Reading

- 3.6. Literary Education
  - 3.6.1. The Definition of Teaching Literature
  - 3.6.2. Elements of Teaching Literature
  - 3.6.3. Literature Teaching Methodologies
  - 3.6.4. Evaluation of Literary Education
- 3.7. Practical Applications
  - 3.7.1. The Definition of Educational Programming
  - 3.7.2. Elements of Educational Programming
  - 3.7.3. Development of a Program for Spanish Language and Literature

### Module 4. Methodology: Teaching and Programming

- 4.1. The Curriculum
  - 4.1.1. What Is It?
  - 4.1.2. Functions
  - 4.1.3. Syllabus Elements
  - 4.1.4. Types of Syllabus
  - 4.1.5. Features
  - 4.1.6. Curricular Approaches
  - 4.1.7. Curriculum Design
  - 4.1.8. Levels of Concreteness
  - 4.1.9. The Fourth Level
  - 4.1.10. Syllabus Structure
- 4.2. Competencies
  - 4.2.1. What are Competencies?
  - 4.2.2. A New Perspective
  - 4.2.3. Features
  - 4.2.4. Key Competencies
  - 4.2.5. Competencies in the Syllabus
  - 4.2.6. Strategies for their Application
  - 4.2.7. Competencies in the Classroom
  - 4.2.8. Teaching Competencies
  - 4.2.9. Communicative Competencies
  - 4.2.10. Competency-based Assessment

- 4.3. Methodology
  - 4.3.1. Introduction
  - 4.3.2. Methodological Principles
  - 4.3.3. Teaching Methods and Techniques
  - 4.3.4. From Transmissive to Active Methods
  - 4.3.5. Exercises vs. Activities
  - 4.3.6. Methodological Strategies
  - 4.3.7. Group Work vs. Cooperative Work
  - 4.3.8. Cooperative Learning
  - 4.3.9. Problem-Based Learning
  - 4.3.10. Project Work
- 4.4. ICT in the Methodology
  - 4.4.1. ICT Today
  - 4.4.2. Digital Literacy
  - 4.4.3. Educating in ICT
  - 4.4.4. Consequences of the Change
  - 4.4.5. ICT Competences in Education
  - 4.4.6. Digital Competences
  - 4.4.7. ICT in Class
  - 4.4.8. ICT for Diversity
  - 4.4.9. ICT Resources in the Classroom
  - 4.4.10. ICT Resources in the Center
- 4.5. Assessment
  - 4.5.1. The Classroom as an Evaluation Context
  - 4.5.2. Types of evaluations
  - 4.5.3. Traditional Assessments
  - 4.5.4. Current Assessments
  - 4.5.5. How to Assess it? Techniques and Instrumentation
  - 4.5.6. Selection of Instruments and Techniques
  - 4.5.7. What to Assess?
  - 4.5.8. Evaluation Meetings
  - 4.5.9. Program Evaluation
  - 4.5.10. Evaluation Together with the Teaching Staff
- 4.6. Educational Programming I
  - 4.6.1. Introduction
  - 4.6.2. The Importance of Educational Programming
  - 4.6.3. Components
  - 4.6.4. Justification
  - 4.6.5. Objectives: Types
  - 4.6.6. Objectives: Sources
  - 4.6.7. Objectives: Formulation
  - 4.6.8. Content: Types
  - 4.6.9. Content: Selection and Organization Criteria
  - 4.6.10. Content: Sequencing Criteria
- 4.7. Educational Programming II
  - 4.7.1. Key Competencies
  - 4.7.2. Methodology: Methodological Principles
  - 4.7.3. Methodology: Area
  - 4.7.4. Methodology: Methodological Strategies
  - 4.7.5. Attention to Diversity
  - 4.7.6. Resources
  - 4.7.7. Assessment
  - 4.7.8. Timing
  - 4.7.9. Other Elements
  - 4.7.10. Relationship Between the Elements of the Syllabus in the Educational Planning
- 4.8. Teaching Units I
  - 4.8.1. Introduction
  - 4.8.2. Relevance
  - 4.8.3. Characteristics and Elements
  - 4.8.4. Identification
  - 4.8.5. General and Teaching Objectives
  - 4.8.6. Assessment Criteria
  - 4.8.7. Assessable Learning Standards
  - 4.8.8. Indicators of achievement
  - 4.8.9. Key Competencies
  - 4.8.10. Contents



- 4.9. Teaching Units II
    - 4.9.1. Methodological Strategies: Methods and Techniques
    - 4.9.2. Activities: Their Role in Teaching Units
    - 4.9.3. Activities: Classification
    - 4.9.4. Activities: Characteristics
    - 4.9.5. Sequence of Activities
    - 4.9.6. Attention to Diversity
    - 4.9.7. Resources
    - 4.9.8. Evaluation: Instrument Selection
    - 4.9.9. Evaluation: Student Qualification
    - 4.9.10. Evaluation of the Teaching Unit: Final Reflection
  - 4.10. Design of Educational Programming for Language and Literature
    - 4.10.1. Characterization of the Material
    - 4.10.2. Contribution of the Subject to the Development of Key Competencies
    - 4.10.3. Communicative Approach
    - 4.10.4. Communication Projects
    - 4.10.5. Selection and Prioritization of the Content
    - 4.10.6. Oral Comprehension and Production
    - 4.10.7. Interaction
    - 4.10.8. Reading
    - 4.10.9. Written production
    - 4.10.10. Literary Education
- Module 5. Teaching Literature**
- 5.1. Teaching Literature and Literary Education
    - 5.1.1. Literary Education
    - 5.1.2. Encouragement to Read
    - 5.1.3. Literary Competence
    - 5.1.4. Literary Education Plan
  - 5.2. Children and Young Adults Literature (CYL) and the Classics
    - 5.2.1. What Is CYL?
    - 5.2.2. CYL and the High School Reading Plan
    - 5.2.3. The Place for the Classics
    - 5.2.4. Adaptations
    - 5.2.5. Proposals for Reading the Classics
  - 5.3. Text Commentary
    - 5.3.1. History and Evolution of Text Commentary
    - 5.3.2. Comprehension and Interpretation of Texts
    - 5.3.3. Guide for Writing a Literary Text Commentary
  - 5.4. Creative Writing
    - 5.4.1. Creative Writing in the Literature Classroom
    - 5.4.2. Writing Workshop
    - 5.4.3. Gianni Rodari and the Art of Inventing Stories
    - 5.4.4. Other Activities for Creative Writing
  - 5.5. School Library
    - 5.5.1. Objectives of the School Library in High School
    - 5.5.2. Book Clubs
    - 5.5.3. The Bibliographic Collection
    - 5.5.4. Encouragement to Read in the School Library
    - 5.5.5. Library, Cultural Dynamization and Participation of the School Community
  - 5.6. Literary Routes
    - 5.6.1. Definition and Origin
    - 5.6.2. Literary Routes in the School Environment
    - 5.6.3. Objectives of Literary Routes
    - 5.6.4. Organization of the Literary Route
  - 5.7. ICT and Literature
    - 5.7.1. What is a Blog?
    - 5.7.2. Keys for Organizing and Designing a Blog
    - 5.7.3. Blogs in the Literature Classroom
    - 5.7.4. Booktubers and Literary Education
    - 5.7.5. Transmedia Literature

- 5.8. Dialogic Interaction and Inquiry
  - 5.8.1. The Sociocultural Perspective. Vygotsky
  - 5.8.2. Interactions and Identity Building
  - 5.8.3. Communicative Acts
  - 5.8.4. Dialogic Inquiry
- 5.9. Dialogic Reading
  - 5.9.1. Foundations of Dialogic Reading
  - 5.9.2. Reading Godmothers and Godfathers
  - 5.9.3. Accompanied Reading
  - 5.9.4. Tutored Library
- 5.10. Dialogical Literary Discussion Groups
  - 5.10.1. The Origin of Dialogic Literary Gatherings
  - 5.10.2. Interactions That Speed Up Reading
  - 5.10.3. The Classics in Pre-School and Primary School
  - 5.10.4. The Functioning of the Discussion Group
  - 5.10.5. Other Dialogical Discussion Groups

## Module 6. Teaching Grammar

- 6.1. The Concept of Grammar
  - 6.1.1. General Introduction
  - 6.1.2. Definition of Grammar and Grammatical Competence
  - 6.1.3. Different Types of Grammar
  - 6.1.4. Definition of Grammar in the Syllabus
  - 6.1.5. Grammatical Construction in High School Education
  - 6.1.6. Metalinguistic Concepts
- 6.2. Theory and Practice of Grammar
  - 6.2.1. Concept of Grammatical Theory
  - 6.2.2. Concept of Grammatical Practice
  - 6.2.3. The Connection Between Theory and Practice
  - 6.2.4. The Role of Syntax
- 6.3. Application of Grammar in the Classroom
  - 6.3.1. Reflection and Communication
  - 6.3.2. Types of Exercises

- 6.4. Linguistic Text Commentary
  - 6.4.1. Concept of Linguistic Commentaries
  - 6.4.2. Importance and Difficulty of Text Commentary
  - 6.4.3. Strategies for the Text Commentary
  - 6.4.4. Tools for the Linguistic Commentary
  - 6.4.5. Elements of the Commentary

## Module 7. Teaching Lexicon and Semantics

- 7.1. Introduction to Lexical-Semantics
  - 7.1.1. Historical Precedents
  - 7.1.2. Significance
  - 7.1.3. Signs and Symbols
  - 7.1.4. Linguistic Communication. The Linguistic Sign
- 7.2. Basic Fundamentals
  - 7.2.1. What is Semantics?
  - 7.2.2. Semantics a Science?
  - 7.2.3. Structural Semantics
  - 7.2.4. Semantics and Society
- 7.3. Learning and Acquisition
  - 7.3.1. Basic Principles
  - 7.3.2. Pedagogical Methods
  - 7.3.3. Evolutionary Development
  - 7.3.4. Difficulties
- 7.4. Production and Creation
  - 7.4.1. Spanish Lexicon
  - 7.4.2. Classification of the Lexicon
  - 7.4.3. Word Formation
  - 7.4.4. Semantic Phenomena
- 7.5. Lexical-Semantic Application
  - 7.5.1. The Need for Explicit Lexicon Teaching
  - 7.5.2. Lexematic

- 7.6. Active Learning
  - 7.6.1. What Is It?
  - 7.6.2. Pedagogical Model
  - 7.6.3. Importance of Active Learning
  - 7.6.4. Tools in the Classroom
- 7.7. Dictionaries
  - 7.7.1. Typology
  - 7.7.2. The Selection Process
  - 7.7.3. The Dictionary as a Pedagogical Resource
  - 7.7.4. Learning Tool
  - 7.7.5. Resources and Strategies
- 7.8. Dictionaries
  - 7.8.1. Reasons and Other Theoretical Issues
  - 7.8.2. Structure
  - 7.8.3. Types of Dictionaries
  - 7.8.4. Spanish Language Dictionary
- 8.4. Pedagogy of Lexis and Pragmatics
  - 8.4.1. Introduction
  - 8.4.2. Pedagogy of Lexis
  - 8.4.3. Pedagogy of Pragmatics
- 8.5. Course Objectives, Programming and Evaluation, Teaching Units and Projects
  - 8.5.1. Introduction
  - 8.5.2. Didactic Programming
  - 8.5.3. The Didactic Unit
- 8.6. Cultural Elements when Teaching Spanish
  - 8.6.1. Introduction
  - 8.6.2. What do we Understand as Culture?
  - 8.6.3. On How to Teach Culture
  - 8.6.4. Choosing Contents
- 8.7. Games, Theater and Other Resources to Teach Spanish as a Secondary Language
  - 8.7.1. Introduction
  - 8.7.2. Games in a Class of Spanish as a Secondary Language
  - 8.7.3. Teaching How to do Theater

## Module 8. Foundations of the didactics of Spanish as a Second Language

- 8.1. The Foundations of Teaching and Learning Foreign Languages
  - 8.1.1. Introduction
  - 8.1.2. General Theories on Learning and Acquiring Foreign Languages
  - 8.1.3. Variables in Teaching Foreign Languages
- 8.2. Methodological Approaches for Teaching Spanish as a Second Language
  - 8.2.1. Introduction
  - 8.2.2. Traditional Methods
  - 8.2.3. Transitioning to More Modern Methods
  - 8.2.4. Modern Approaches
  - 8.2.5. New Trends in Learning Languages
- 8.3. The Pedagogy of Grammar
  - 8.3.1. Introduction
  - 8.3.2. What is Grammar in Spanish as a Foreign Language?
  - 8.3.3. Correct Selection of Linguistic or Grammatical Content
  - 8.3.4. From Knowing to Using a Language
  - 8.3.3. Explaining Grammar in a Spanish as a Foreign Language Class

## Module 9. Learning Mathematics in Secondary School

- 9.1. Defining Learning
  - 9.1.1. The Role of Learning
  - 9.1.2. Types of Learning
- 9.2. Learning Mathematics
  - 9.2.1. Differential Learning of Mathematics
  - 9.2.2. Features of Mathematics
- 9.3. Cognitive and Metacognitive Processes in Mathematics
  - 9.3.1. Cognitive Processes in Mathematics
  - 9.3.2. Metacognitive Processes in Mathematics
- 9.4. Attention and Mathematics
  - 9.4.1. Focused Attention and Mathematics Learning
  - 9.4.2. Sustained Attention and Mathematics Learning
- 9.5. Memory and Mathematics
  - 9.5.1. Short-Term Memory and Mathematics Learning
  - 9.5.2. Long-Term Memory and Mathematics Learning

- 9.6. Language and Mathematics
  - 9.6.1. Language Development and Mathematics
  - 9.6.2. Mathematical Language
- 9.7. Intelligence and Mathematics
  - 9.7.1. Development of Intelligence and Mathematics
  - 9.7.2. Relationship between High Abilities, Giftedness with Mathematics
- 9.8. Neural Bases of Mathematics Learning
  - 9.8.1. Neural Foundations of Mathematics
  - 9.8.2. Adjacent Neural Processes of Mathematics
- 9.9. Characteristics of Secondary School Students
  - 9.9.1. Adolescent Emotional Development
  - 9.9.2. Emotional Intelligence Applied to Adolescents
- 9.10. Adolescence and Mathematics
  - 9.10.1. Adolescent Mathematical Development
  - 9.10.2. Adolescent Mathematical Thinking

## Module 10. Gamification in Mathematics

- 10.1. Play
  - 10.1.1. Play
  - 10.1.2. Play Since the Middle Ages
- 10.2. Games in Childhood
  - 10.2.1. Areas Developed by Games
- 10.3. Games in Adolescence
  - 10.3.1. Introduction
    - 10.3.1.1. Elements which make Games are so Important for Adolescents
    - 10.3.1.2. Adolescents and Video Games
    - 10.3.1.3. Better Hand-Eye Coordination
    - 10.3.1.4. Faster Thinking, Sharper Memory
    - 10.3.1.5. Greater Creativity
    - 10.3.1.6. Promote Learning
  - 10.3.2. The Video Game as an Educational Tool
    - 10.3.2.1. When to Act When is Video Gaming Detrimental?

- 10.4. Gamification
  - 10.4.1. Motivation and “Continuous Feedback”
    - 10.4.1.1. Personalized Education
  - 10.4.2. Societal Change
  - 10.4.3. Elements of Gamification
- 10.5. Gamification of Mathematics
  - 10.5.1. Representation of all Types of Functions
  - 10.5.2. Solving 1st and 2nd Degree Equations
  - 10.5.3. Solving Systems of Equations
- 10.6. Application of Gamification in Mathematics Part I
  - 10.6.1. How Gamification Works
  - 10.6.2. Gamification Model
  - 10.6.3. Purpose of Gamification
  - 10.6.4. Padlocks
  - 10.6.5. Analysis of Gamification Elements
- 10.7. Application of Gamification in Mathematics Part II
  - 10.7.1. Introduction to Augmented Reality
  - 10.7.2. Creating Auras
  - 10.7.3. Mobile Configuration

## Module 11. Problem-Based Learning (PBL) in Mathematics

- 11.1. What is a PBL?
  - 11.1.1. Problem-Based Learning or Project-Based Learning?
    - 11.1.1.1. Problem-Based Learning
    - 11.1.1.2. Project-based Learning
- 11.2. Features of PBL in Mathematics
  - 11.2.1. Features, Pros and Cons of Master Classes
    - 11.2.1.1. Features
    - 11.2.1.2. Positive Aspects
    - 11.2.1.3. Negative Aspects
  - 11.2.2. Features, Advantages and Disadvantages of PBL
    - 11.2.2.1. Features
    - 11.2.2.2. Positive Aspects
    - 11.2.2.3. Negative Aspects

- 11.3. Planning PBL in Mathematics
  - 11.3.1. What is a Problem?
  - 11.3.2. Criteria for Developing PBL problems
  - 11.3.3. Variants of PBL
    - 11.3.3.1. PBL for 60 Students (Hong Kong)
    - 11.3.3.2. PBL 4x4
  - 11.3.4. Methodology
    - 11.3.4.1. Group Formation
    - 11.3.4.2. Planning and Design of PBL
  - 11.3.5. Design of PBL in Mathematics
- 11.4. Development of PBL in Mathematics
  - 11.4.1. Evolution of Group in the PBL
  - 11.4.2. Steps to be Taken by Students in the Development of PBL
    - 11.4.2.1. General Process for Students
    - 11.4.2.2. Process Established by Morales and Landa (2004)
    - 11.4.2.3. Process Established by Exley and Dennick (2007)
  - 11.4.3. Use of Researched Information
- 11.5. Role of the Teacher and the Student
  - 11.5.1. The Role Played by Teachers in PBL
  - 11.5.2. Tutor's Manner of Guiding/Counselling
  - 11.5.3. Use of Researched Information
  - 11.5.4. The Role Played by Students in PBL
  - 11.5.5. Student Roles in PBL
- 11.6. Assessment of PBL in Mathematics
  - 11.6.1. Student Assessment
  - 11.6.2. Teacher Evaluation
  - 11.6.3. PBL Assessment (Process)
  - 11.6.4. Assessment of Process Outcome
  - 11.6.5. Assessment Techniques

- 11.7. Example of PBL Applied to Mathematics
  - 11.7.1. Planning or Design of PBL
    - 11.7.1.1. Phases of the PBL Design
    - 11.7.1.2. Application Phases of PBL Design
  - 11.7.2. Group Determination
  - 11.7.3. Role of the Teacher
  - 11.7.4. Work Process with Students
  - 11.7.5. Evaluation of PBL

## Module 12. Cooperative Learning in Mathematics

- 12.1. What is Cooperative Learning? How is it Applied to Mathematics?
  - 12.1.1. Differentiation between Cooperative and Collaborative Work
- 12.2. The Objectives of Cooperative Learning in Mathematics
  - 12.2.1. The Objectives of Cooperative Learning
  - 12.2.2. Benefits of this Learning Method
  - 12.2.3. Objectives of Cooperative Learning in a Multicultural Context
  - 12.2.4. Disadvantages of this Learning Method
  - 12.2.5. In Mathematics
- 12.3. The Features of Cooperative Learning in Mathematics
  - 12.3.1. Positive Interdependence
  - 12.3.2. Mutual Support
  - 12.3.3. Individual Responsibility
  - 12.3.4. Social Skills
  - 12.3.5. Self-Assessment of Group Performance
- 12.4. Types of Cooperative Learning in Mathematics
  - 12.4.1. Puzzle or Jigsaws
  - 12.4.2. Team Achievement Divisions
  - 12.4.3. Research Groups
  - 12.4.4. Co-op Co-op
  - 12.4.5. Teams-Games-Tournaments

- 12.5. Planning and Guidance in Cooperative Work in Mathematics
  - 12.5.1. Implementation Stages
  - 12.5.2. Group Formation
  - 12.5.3. Classroom Set-Up
  - 12.5.4. Assignment of Student Roles
  - 12.5.5. Explanation of the Task to be Performed
  - 12.5.6. Teacher Intervention in Cooperative Groups
- 12.6. The Teacher's Role in Cooperative Work in Mathematics
  - 12.6.1. Roles of the Teacher
  - 12.6.2. The Role of the Teacher
- 12.7. The Assessment of Cooperative Learning in Mathematics
  - 12.7.1. Assessment of the Individual Learning Process while Working Cooperatively in Mathematics
  - 12.7.2. Evaluation of the of Group Learning Process while Working: Cooperatively in Mathematics
  - 12.7.3. The Role of Observation for Assessment
  - 12.7.4. Co-Evaluation of Cooperative Work in Mathematics
  - 12.7.5. Self-evaluation of Cooperative Work in Mathematics
- 12.8. Examples of Cooperative Learning Applied to Mathematics
  - 12.8.1. Review of Cooperative Project Planning
  - 12.8.2. First Phase: Preliminary Decision-Making
    - 12.8.2.1. Learning objectives
    - 12.8.2.2. Cooperative Methodology to be Used
    - 12.8.2.3. Group Size
    - 12.8.2.4. Learning Materials
    - 12.8.2.5. Assignment of Students to Groups
    - 12.8.2.6. Preparation of the Physical Space
    - 12.8.2.7. Role Distribution
  - 12.8.3. Second Phase: Task Structuring: Positive Interdependence
    - 12.8.3.1. Explanation of the Task
    - 12.8.3.2. Explanation from of Success Criteria
    - 12.8.3.3. Structuring Positive Interdependence
    - 12.8.3.4. Structuring of Individual Responsibility
    - 12.8.3.5. Interpersonal Skills and Social Skills

- 12.8.4. Third Phase: Execution and Control of the Process
- 12.8.5. Fourth Phase: Evaluation of the Learning Process and Group Interaction
  - 12.8.5.1. Activity Closure
  - 12.8.5.2. Assessment of Quantity and Quality of Learning
  - 12.8.5.3. Evaluation of Group Performance

### Module 13. Comprehension Projects in Mathematics

- 13.1. What are Comprehension Projects Applied to Mathematics?
  - 13.1.1. Elements of the Mathematics Comprehension Project
- 13.2. Review the Multiple Intelligences Applied to Mathematics
  - 13.2.1. Types of Multiple Intelligences
  - 13.2.2. Biological Criteria
  - 13.2.3. Developmental Psychology Criteria
  - 13.2.4. Experimental Psychology Criteria
  - 13.2.5. Psychometric Studies Criteria
  - 13.2.6. Logical Analysis Criteria
  - 13.2.7. The Role Played by the Teacher
  - 13.2.8. Multiple Intelligences applied to Mathematics
- 13.3. Presentation of the Mathematics Comprehension Project
  - 13.3.1. What can you Expect to Find in a Classroom Where you are Teaching for Understanding?
  - 13.3.2. What is the Role of the Teacher in Classes Aimed at Comprehension?
  - 13.3.3. What do Students do in Classes Aimed at Comprehension?
  - 13.3.4. How to Motivate Students to Learn Science
  - 13.3.5. Developing a Comprehension Project
  - 13.3.6. Thinking about the Class from Back to Front
  - 13.3.7. Relationship between the Elements of the Comprehension Project
  - 13.3.8. Some Reflections on Working with the Teaching for Understanding Framework
  - 13.3.9. Curricular Unit on the Concept of Probability
- 13.4. The Generative Topic in the Comprehension Project applied to Mathematics
  - 13.4.1. Generative Topics

- 13.4.2. Key Features of Generative Topics
- 13.4.3. How to Plan Generative Topics
- 13.4.4. How to Improve Brainstorming on Generative Topics
- 13.4.5. How to Teach with Generative Topics
- 13.5. Driving Threads in the Comprehension Project Applied to Mathematics
  - 13.5.1. Key Features of Comprehension Goals
- 13.6. Comprehension Activities in the Mathematics Comprehension Project
  - 13.6.1. Preliminary Activities in the Mathematics Comprehension Project
  - 13.6.2. Research Activities for a Mathematics Comprehension Project
  - 13.6.3. Synthesis Activities in the Mathematics Comprehension Project
- 13.7. Continuous Assessment in the Mathematics Comprehension Project
  - 13.7.1. Continuous Diagnostic Assessment
- 13.8. Documentation Creation in the Mathematics Comprehension Project
  - 13.8.1. Documentation for the Teacher's Own Use
  - 13.8.2. Documentation to be Given to Students

## Module 14. Metacognitive Learning and Mathematics

- 14.1. Learning and Mathematics
  - 14.1.1. learning
  - 14.1.2. Learning Styles
  - 14.1.3. Factors from Learning
  - 14.1.4. Teaching and Mathematics Learning
- 14.2. Learning Theories
  - 14.2.1. Behaviorist Theory
  - 14.2.2. Cognitivist Theory
  - 14.2.3. Constructivist Theory
  - 14.2.4. Sociocultural Theory
- 14.3. What is Metacognition in Mathematics?
  - 14.3.1. What is Metacognition?
  - 14.3.2. Metacognitive Knowledge
  - 14.3.3. Strategies
  - 14.3.4. Metacognitive Strategies in Mathematics
- 14.4. Teaching to Think in Mathematics
  - 14.4.1. Teaching to Learn and Think
- 14.4.2. Keys to Teaching Learning and Thinking
- 14.4.3. Mental Strategies for Learning and Thinking
- 14.4.4. Methodology for Learning to Learn
- 14.4.5. Factors Influencing Study and Work
- 14.4.6. Study Planning
- 14.4.7. Intellectual Work Techniques
- 14.5. Learning Strategies in Mathematics: Problem Solving
  - 14.5.1. Metacognition in Problem Solving
  - 14.5.2. What is a Problem in Mathematics?
  - 14.5.3. Types of Problems
  - 14.5.4. Problem-Solving Models
    - 14.5.4.1. Pólya's Model
    - 14.5.4.2. Mayer's Model
    - 14.5.4.3. A. H. Schoenfeld's Model
    - 14.5.4.4. Mason-Burton-Stacey's Model
    - 14.5.4.5. Miguel de Guzmán's Model
    - 14.5.4.6. Manoli Pifarré and Jaume Sanuy's Model
- 14.6. Example of Metacognitive Learning Applied to Mathematics
  - 14.6.1. Learning Tools
    - 14.6.1.1. Underlining
    - 14.6.1.2. Drawing
    - 14.6.1.3. Summary
    - 14.6.1.4. The Scheme
    - 14.6.1.5. Conceptual Maps
    - 14.6.1.6. Mind Maps
    - 14.6.1.7. Teaching to Learn
    - 14.6.1.8. Brainstorming
  - 14.6.2. Application of Metacognition in Problem Solving

## Module 15. Designing a Mathematics Teaching Unit

- 15.1. What does the Design of a Mathematics Teaching Unit Entail?
  - 15.1.1. Elements of a Teaching Unit
    - 15.1.1.1. Description
  - 15.1.2. Curriculum
    - 15.1.2.1. General Objectives for the Stage
    - 15.1.2.2. General Objectives for the Subject
      - 15.1.2.2.1. Linguistic Communication Skills
      - 15.1.2.2.2. Mathematical competence and basic competences in science and technology
      - 15.1.2.2.3. Digital Competence
      - 15.1.2.2.4. Learning to Learn
      - 15.1.2.2.5. Social and Civic Competences
      - 15.1.2.2.6. Sense of Initiative and Entrepreneurship
      - 15.1.2.2.7. Cultural Awareness and Expressions
  - 15.1.3. Contents
    - 15.1.3.1. Minimum Contents
    - 15.1.3.2. Cross-cutting Contents
    - 15.1.3.3. Interdisciplinary Contents
  - 15.1.4. Methodology
    - 15.1.4.1. Sequence of Activities
    - 15.1.4.2. Material Resources
    - 15.1.4.3. Organization of Space and Timing
    - 15.1.4.4. Attention to Diversity
  - 15.1.5. Assessment
    - 15.1.5.1. Assessment Criteria
    - 15.1.5.2. Assessable Learning Standards
    - 15.1.5.3. Teaching Methodology
    - 15.1.5.4. Skills
- 15.2. Introduction of the Mathematics Teaching Unit
  - 15.2.1. Early Childhood and
  - 15.2.2. General Objectives for the Stage
  - 15.2.3. General Objectives for the Subject
  - 15.2.4. Key Competencies
  - 15.2.5. Cross-cutting Elements
- 15.3. Recipients of the Mathematics Teaching Unit
  - 15.3.1. Students with Special Educational Needs (SEN)
    - 15.3.1.1.1. Definition of ELVIDs
    - 15.3.1.2. Definition of ASDL
  - 15.3.2. Students with High Abilities
    - 15.3.2.1. The School
    - 15.3.2.2. The role of the teacher in the classroom
  - 15.3.3. Students with Attention Deficit Hyperactivity Disorder (ADHD)
    - 15.3.3.1.1. At school
    - 15.3.3.2. The role of the teacher in the classroom
  - 15.3.4. Students with Autism Spectrum Disorder (ASD)
    - 15.3.4.1. Characteristics
    - 15.3.4.2. The role of the teacher in the classroom
  - 15.3.5. Students with Learning Difficulties
    - 15.3.5.1. Dislexia
    - 15.3.5.2. Disgrafía
    - 15.3.5.3. Discalculia
- 15.4. Choice of the methodology for the implementation of the teaching unit
  - 15.4.1. Gamification in Mathematics
  - 15.4.2. The Portfolio Applied to Mathematics
  - 15.4.3. The Learning Landscape Applied to Mathematics
  - 15.4.4. Problem-Based Learning (PBL) in Mathematics
  - 15.4.5. Cooperative Learning in Mathematics
  - 15.4.6. Comprehension Projects Applied to Mathematics
  - 15.4.7. Metacognitive Learning and Mathematics
  - 15.4.8. Flipped Classroom applied to Mathematics
  - 15.4.9. Conceptual Jigsaw Puzzles applied to Mathematics April 15, 2010) Digital Murals Applied to Mathematics



- 15.5. Selection of the Work Topic for the Mathematics Teaching Unit
    - 15.5.1. Mathematics - High School Years 1 and 2
      - 15.5.1.1. Mathematical Processes, Methods and Attitudes
      - 15.5.1.2. Numbers and Algebra
      - 15.5.1.3. Geometry
      - 15.5.1.4. Functions
      - 15.5.1.5. Statistics and Probability
    - 15.5.2. Mathematics Aimed at Year: School Students 3 ESO
      - 15.5.2.1. Mathematical Processes, Methods and Attitudes
      - 15.5.2.2. Numbers and Algebra
      - 15.5.2.3. Geometry
      - 15.5.2.4. Functions
      - 15.5.2.5. Statistics and Probability
    - 15.5.3. Mathematics Aimed at Year: School Students 4 ESO
      - 15.5.3.1. Mathematical Processes, Methods and Attitudes
      - 15.5.3.2. Numbers and Algebra
      - 15.5.3.3. Geometry
      - 15.5.3.4. Functions
      - 15.5.3.5. Statistics and Probability
    - 15.5.4. Mathematics Aimed at Applied Teaching for Year: Students 3 ESO
      - 15.5.4.1. Mathematical Processes, Methods and Attitudes
      - 15.5.4.2. Numbers and Algebra
      - 15.5.4.3. Geometry
      - 15.5.4.4. Functions
      - 15.5.4.5. Statistics and Probability
    - 15.5.5. Mathematics Aimed at Applied Teaching for Year 4 High School Students
      - 15.5.5.1. Mathematical Processes, Methods and Attitudes
      - 15.5.5.2. Numbers and Algebra
      - 15.5.5.3. Geometry
      - 15.5.5.4. Functions
      - 15.5.5.5. Statistics and Probability
  - 15.5.6. Mathematics I Baccalaureate (High School)
    - 15.5.6.1. Mathematical Processes, Methods and Attitudes
    - 15.5.6.2. Numbers and Algebra
    - 15.5.6.3. Analysis
    - 15.5.6.4. Geometry
    - 15.5.6.5. Statistics and Probability
  - 15.5.7. Mathematics II Second Part of High School
    - 15.5.7.1. Mathematical Processes, Methods and Attitudes
    - 15.5.7.2. Numbers and Algebra
    - 15.5.7.3. Analysis
    - 15.5.7.4. Geometry
    - 15.5.7.5. Statistics and Probability
  - 15.5.8. Mathematics Applied to Social Sciences- Year: Baccalaureate (High School)
    - 15.5.8.1. Mathematical Processes, Methods and Attitudes
    - 15.5.8.2. Numbers and Algebra
    - 15.5.8.3. Analysis
    - 15.5.8.4. Statistics and Probability
  - 15.5.9. Mathematics Applied to Social Sciences- Year: Second Part of High School
    - 15.5.9.1. Mathematical Processes, Methods and Attitudes
    - 15.5.9.2. Numbers and Algebra
    - 15.5.9.3. Analysis
    - 15.5.9.4. Statistics and Probability
- 15.6. Creation of the Mathematics Teaching Unit
    - 15.6.1. Elements of a Teaching Unit
      - 15.6.1.1. Description
      - 15.6.1.2. Curriculum
        - 15.6.1.2.1. General Objectives for the Stage
        - 15.6.1.2.2. General Objectives for the Subject
        - 15.6.1.2.3. Key Competencies
      - 15.6.1.3. Contents
      - 15.6.1.4. Methodology
      - 15.6.1.5. Sequence of Activities
      - 15.6.1.6. Material Resources

- 15.6.1.7. Organization of Space and Timing
- 15.6.1.8. Attention to Diversity
- 15.6.1.9. Assessment
- 15.7. Introduction of the Mathematics Teaching Unit
  - 15.7.1. The Cover
  - 15.7.2. The Index
  - 15.7.3. Previous Knowledge
  - 15.7.4. Themes
- 15.8. Classroom Application of the Mathematics Teaching Unit
  - 15.8.1. Documentation Delivery
  - 15.8.2. Creation of Cooperative Groups
  - 15.8.3. Cooperative Theoretical Work
  - 15.8.4. Synthesis activity: Digital Wall
  - 15.8.5. Presentation of the Digital Mural
- 15.9. Assessment of a Mathematics Teaching Unit
  - 15.9.1. Competency-Based Evaluation imperative
    - 15.9.1.1. Assessment and Grade-
  - 15.9.2. Assessment of the Teaching Unit
  - 15.9.3. Student Assessment
  - 15.9.4. Assessment of the Teaching Unit
  - 15.9.5. Grade

## Module 16. Teaching Social Sciences

- 16.1. Transition from Expository to Interactive Education
  - 16.1.1. Objectives
  - 16.1.2. New Educational Trends
  - 16.1.3. Teaching Methods in Social Sciences Social
- 16.2. Constructivism
  - 16.2.1. Building Learning Using Web 2.0.
  - 16.2.2. Constructivist Strategies to Teach Social
- 16.3. Teaching Documents





- 16.3.1. Introduction
- 16.3.2. E-learning
- 16.3.3. Learning Environments
- 16.3.4. Teaching Documents
- 16.4. Information Search and Organization
  - 16.4.1. Search Tools
  - 16.4.2. Other Google Information Search Tools
  - 16.4.3. Content Management
- 16.5. Information Storage
  - 16.5.1. The Cloud: Concept
  - 16.5.2. An Example of Cloud Computing in Education
- 16.6. Content Creation
  - 16.6.1. Virtual Media Libraries
  - 16.6.2. YouTube: Audiovisual Content
- 16.7. Content Presentation
  - 16.7.1. Introduction
  - 16.7.2. Creating Presentations
  - 16.7.3. Maps and Timelines
- 16.8. Content Publication
  - 16.8.1. Creative Commons Licenses
  - 16.8.2. Creative Commons
  - 16.8.3. Educational Blogs
  - 16.8.4. Social media
- 16.9. Communication and Collaborative Work
  - 16.9.1. Wikis
  - 16.9.2. Google Sites
  - 16.9.3. Collaborative Writing
- 16.10. Gamification
- 16.11. Augmented Reality
- 16.12. What is Gamification?
- 16.13. Proposals to Gamify the Classroom

## Module 17. Geography and History as Social Sciences

- 17.1. Concept of Social Science
  - 17.1.1. Social Sciences
  - 17.1.2. Concept of History
  - 17.1.3. Concept of Geography
- 17.2. Concept of History in Antiquity and the Middle Ages
  - 17.2.1. Myth and Its Written Record
  - 17.2.2. Greek and Roman Historians
  - 17.2.3. History in Medieval Christianity
- 17.3. Renaissance, Baroque and Enlightenment History
  - 17.3.1. Renaissance and Baroque
  - 17.3.2. The Enlightened Spirit
  - 17.3.3. Illustrated Historiography
- 17.4. Academic Consecration of History (19th Century)
  - 17.4.1. History as an Academic Discipline: Romanticism and Historicism
  - 17.4.2. Positivism
  - 17.4.3. National Histories
  - 17.4.4. The Rankean Method
  - 17.4.5. Langlois Seignobos
  - 17.4.6. Historical Materialism
- 17.5. History in the 20th Century
  - 17.5.1. Macroteoric Models
  - 17.5.2. The School of Annals
  - 17.5.3. New Historiographical Proposals
- 17.6. Geography in Antiquity
  - 17.6.1. Greece:
  - 17.6.2. Rome
  - 17.6.3. The Eastern World
- 17.7. Geography in the Middle Ages and Modernity
  - 17.7.1. Medieval Geography: Different Sources
  - 17.7.2. Modern Geography and Different Projections
  - 17.7.3. The Importance of Geography and Cartography

- 17.8. Modern and Contemporary Geography
  - 17.8.1. Modern Geography and Different Projections
  - 17.8.2. Advances in Navigation
  - 17.8.3. New Places and Routes
- 17.9. Historical Periodization
  - 17.9.1. The First Periodizations
  - 17.9.2. Cellarius and the Classical Division
  - 17.9.3. Other Periodization Proposals
- 17.10. Categorization of Geography
  - 17.10.1. Physical Geography
  - 17.10.2. Human Geography
  - 17.10.3. Regional Geography
  - 17.10.4. Geopolitics

## Module 18. The Importance of Teaching Geography and History

- 18.1. The Path of History in Education
  - 18.1.1. History Emerges in Education
  - 18.1.2. Its Place in the Humanities
  - 18.1.3. Adapting History to Academic Life
- 18.2. The Path of Geography in Education
  - 18.2.1. Geography in Education
  - 18.2.2. Its Ambiguous Place between the Humanities and Other Sciences
  - 18.2.3. Adapting Geography to Academic Life
- 18.3. Historians as Teachers
  - 18.3.1. Academic Profile of Historians
  - 18.3.2. Historians as Researchers and Teachers
  - 18.3.3. The Importance of Knowing History
- 18.4. Geographer as Teachers
  - 18.4.1. Academic Profile of Geographers
  - 18.4.2. Geography and Spatial Planning Degree White Book
  - 18.4.3. Professional Opportunities and the Importance of Geography Teachers

- 18.5. Art History as an Academic Discipline
  - 18.5.1. Academic Profile of Art Historians
  - 18.5.2. Fundamental Discipline to Know Our History and Environment
  - 18.5.3. Career Opportunities and the Importance of Knowledge of Art and Heritage
- 18.6. Changes in the Didactic Conception of the Social Sciences
  - 18.6.1. Links between History and Geography
  - 18.6.2. From Memorization to More Didactic Teaching
  - 18.6.3. Changes in Workbooks and Textbooks
- 18.7. Interdisciplinarity
  - 18.7.1. Auxiliary Sciences of History
  - 18.7.2. Auxiliary Sciences of Geography
  - 18.7.3. The Need for Cooperation between Different Subjects
- 18.8. A Discipline of the Past, for the Present and the Future
  - 18.8.1. Historical Sources and Art as a Source of Knowledge
  - 18.8.2. The Importance of Art from an Early Age
  - 18.8.3. The Need to Expand the Discipline in Educational Curricula
- 18.9. The Value of Humanistic Knowledge Today
  - 18.9.1. Crisis of the Humanities
  - 18.9.2. The Humanities and Their Work in Our Society
  - 18.9.3. Conclusion and Reflection on the Role of the Humanities in the Western World

## Module 19. Prehistory

- 19.1. The Importance of Anthropology and Archeology in the Study of Human Beings
  - 19.1.1. Prehistory
  - 19.1.2. Archeology
  - 19.1.3. Summary
- 19.2. The Hominization Process
  - 19.2.1. Objective
  - 19.2.2. The Hominization Process
- 19.3. The Paleolithic
  - 19.3.1. Objectives
  - 19.3.2. The Paleolithic

- 19.4. The Neolithic and Its Expansion
  - 19.4.1. Objectives
  - 19.4.2. General Features of the Mesolithic
  - 19.4.3. General Features of the Neolithic
- 19.5. The Metal Ages
  - 19.5.1. Prehistoric Periods
  - 19.5.2. The Iron Age
- 19.6. Prehistory in America. The First Settlers on the American Continent
  - 19.6.1. Theories on First Settlements
  - 19.6.2. Evolution of the Different American Peoples
- 19.7. 2.0. Tools Applied to Prehistory
  - 19.7.1. Pinterest
  - 19.7.2. Blogger
- 19.8. Evaluation Systems
  - 19.8.1. Collaborative Learning. Peer Assessment. Co-Assessment
  - 19.8.2. Roles within Cooperative Groups and Cooperative Structures
- 19.9. Activities
  - 19.9.1. Assessment Tools
  - 19.9.2. Cooperative Group Logbook
- 19.10. Evaluation Tests
  - 19.10.1. Assessment Activities and Test

## Module 20. Ancient History

- 20.1. Mesopotamia
  - 20.1.1. Mesopotamia: The Origin of Civilization
  - 20.1.2. Sumer and Akkadia
  - 20.1.3. Babylon and Assyria
- 20.2. Ancient Egypt
  - 20.2.1. Egypt: Geographical Environment and Historical Context
  - 20.2.2. The Predynastic Period
  - 20.2.3. The Protodynastic Period
  - 20.2.4. The Archaic Period
  - 20.2.5. Ancient Empires
  - 20.2.6. The First Intermediate Period

- 20.2.7. Middle Empires
- 20.2.8. The Second Intermediate Period
- 20.2.9. New Empires
- 20.2.10 The Third Intermediate Period
- 20.2.11 The Late Period
- 20.2.12 Ptolemaic Egypt
- 20.3. Ancient Greece
  - 20.3.1. Ancient Greece: Geographical Space
  - 20.3.2. Aegean Civilizations in the Bronze Age
  - 20.3.3. The Dark Ages
  - 20.3.4. The Archaic Age
  - 20.3.5. Classical Greece
  - 20.3.6. Hellenistic Greece
- 20.4. Ancient Rome
  - 20.4.1. Geographical Space in Ancient Rome
  - 20.4.2. The Origins of Ancient Rome
  - 20.4.3. The Monarchic Period
  - 20.4.4. The Republican Period
  - 20.4.5. The High Imperial Period
  - 20.4.6. The Low Imperial Period
- 20.5. The Romanization Process
  - 20.5.1. The Concept of Romanization
  - 20.5.2. The Romanization Process
  - 20.5.3. Factors and Consequences
- 20.6. American Ancient Cultures
  - 20.6.1. Ancient America
  - 20.6.2. The Maya Civilization
  - 20.6.3. The Aztec Civilization
  - 20.6.4. The Inca Civilization
- 20.7. 2.0.Tools Applied to Ancient History
  - 20.7.1. 2.0.Tools in Education
  - 20.7.2. Types of 2.0.Tools
  - 20.7.3. 2.0.Tools Applied to Ancient History

- 20.8. Evaluation Systems
  - 20.8.1. Using Assessments in Learning
  - 20.8.2. The Cooperative Model and Assessments
  - 20.8.3. Self-evaluation
  - 20.8.4. Peer Assessment
  - 20.8.5. Co-evaluation
  - 20.8.6. Applying Cooperative Models to Ancient History Courses
- 20.9. Activities
  - 20.9.1. Theoretical Approaches in Teaching Activities
  - 20.9.2. Types of Activities
  - 20.9.3. Using Activities in Teaching Ancient History
- 20.10. Evaluation Tests
  - 20.10.1. Objectives
  - 20.10.2. Practical Application of Assessments
  - 20.10.3. Headings
  - 20.10.4. Checklists
  - 20.10.5. Range Scales
  - 20.10.6. Portfolio/Notebook
  - 20.10.7. Other Types

## Module 21. Average Age

- 21.1. The Early Middle Ages I
  - 21.1.1. The Fall of the Roman World
  - 21.1.2. The Romano-Germanic Kingdoms
- 21.2. The Early Middle Ages II
  - 21.2.1. The Byzantine Empire
  - 21.2.2. Islam
- 21.3. The Early Middle Ages III
  - 21.3.1. The Carolingian Era and the Birth of Europe
  - 21.3.2. The Holy Roman Empire: Charlemagne
- 21.4. The High Middle Ages I
  - 21.4.1. Romanesque Art in the Iberian Peninsula
  - 21.4.2. Western Europe: Growth and Expansion

- 21.5. The High Middle Ages II
  - 21.5.1. The Spread of Christianity. The Crusades and Other Expansionary Movements
  - 21.5.2. Feudal Transformation. Society, Culture, Economy and Mentality
- 21.6. The High Middle Ages III
  - 21.6.1. The Power Struggle between the Church and the Empire
  - 21.6.2. The Christian Kingdoms and the Taifas in the Iberian Peninsula
- 21.7. The Late Middle Ages I
  - 21.7.1. European Conflicts in the Late Middle Ages
  - 21.7.2. The Great Asian Civilizations
- 21.8. The Late Middle Ages II
  - 21.8.1. The End of the Byzantine Empire
  - 21.8.2. The Ottoman Empire at the Gates of Europe
- 21.9. The Middle Ages beyond the Atlantic
  - 21.9.1. The Inca Civilization
  - 21.9.2. The Aztec Civilization

## Module 22. Europe in the Modern Age

- 22.1. Modern States
  - 22.1.1. Origin and Formation
  - 22.1.2. Modern Monarchies and Political Forms in Europe
  - 22.1.3. Renaissance Culture and Humanism
- 22.2. Geographical Discoveries
  - 22.2.1. Discovery and European Colonization
  - 22.2.2. The Discovery of America
  - 22.2.3. Beginnings of Colonization
  - 22.2.4. Imperial Colonization
- 22.3. 16th Century Europe
  - 22.3.1. Introduction
  - 22.3.2. The Rupture of Christianity. Reformation and Counter-Reformation
- 22.4. 17th Century Europe
  - 22.4.1. Introduction
  - 22.4.2. Pax Hispanica and the Thirty Years' War
  - 22.4.3. The Imperialism of Louis XIV
  - 22.4.4. The Baroque

- 22.5. Conquest and Colonization in Hispanic America
  - 22.5.1. Colonization in the 16th and 17th Centuries
  - 22.5.2. Hispanic American Societies and Economies
  - 22.5.3. The Colonization of the Americas in the Spanish Black Legend
- 22.6. 18th Century Europe and America
  - 22.6.1. Introduction
  - 22.6.2. The Age of Enlightenment: The Enlightenment
  - 22.6.3. The Enlightened Absolutism
  - 22.6.4. 18th Century European Society and Economy
  - 22.6.5. The Bourbon Reforms in America
- 22.7. Cooperative Work
  - 22.7.1. Cooperative Work
  - 22.7.2. Interdisciplinary Work
- 22.8. New Technologies Applied to Teaching Modern History
  - 22.8.1. Platforms and Presentations
  - 22.8.2. Information Search on the Internet and Social Networks
  - 22.8.3. Timelines and Conceptual Maps
  - 22.8.4. Blogs and Mobile Devices
  - 22.8.5. Historical Re-enactment Video Games
- 22.9. Complementary Activities
  - 22.9.1. Introduction
  - 22.9.2. Text, Map, Image and Audiovisual Resource Analysis
  - 22.9.3. Preparing Conceptual Maps and Timelines
  - 22.9.4. Activities Outside the Classroom
- 22.10. Evaluation Tests
  - 22.10.1. Essay Type Test: Extended Response
  - 22.10.2. Essay Type Test: Restricted Response
  - 22.10.3. Other Assessment Tests

## Module 23. The Late Modern Period

- 23.1. The Foundations of the Contemporary World
  - 23.1.1. 18th Century Europe
  - 23.1.2. Illustration
  - 23.1.3. Economic Liberalism
  - 23.1.4. The Agrarian and Demographic Revolution
  - 23.1.5. The Industrial Revolution
  - 23.1.6. Foundations of the Western World Model
  - 23.1.7. 18th Century Culture and Art
  - 23.1.8. The Concepts of Contemporaneity
- 23.2. 18th Century Liberalism and Revolutions
  - 23.2.1. 18th Century Liberalism and Revolutions
  - 23.2.2. 19th Century Restoration and Revolutions
  - 23.2.3. Nationalism
- 23.3. The Emergence of the New American States
  - 23.3.1. Reception of Enlightenment Ideas
  - 23.3.2. Economic Situation
  - 23.3.3. From Emancipation to Independence
  - 23.3.4. America after Independence
- 23.4. Labor Movements and Democratic Liberalism
  - 23.4.1. Class Society
  - 23.4.2. Labor Movements
  - 23.4.3. Democratic Liberalism
  - 23.4.4. Colonial Empires
  - 23.4.5. International Relations
- 23.5. The First World War and the Russian Revolution
  - 23.5.1. The First World War: Causes
  - 23.5.2. The Russian Revolution
- 23.6. The Interwar Period and the Rise of Fascism
  - 23.6.1. The New International Order
  - 23.6.2. Measures to Overcome Recession
  - 23.6.3. The Rise of Fascism
- 23.7. The Second World War
  - 23.7.1. Causes
  - 23.7.2. Axis Powers
  - 23.7.3. Allied Powers
  - 23.7.4. How the Conflict Unfolded
- 23.8. The Cold War
  - 23.8.1. The End of the Alliance and the Origins of Bipolarity
  - 23.8.2. Asian Decolonization and the Middle East Conflict
  - 23.8.3. The Death of Stalin and the 20th Century Congress of the CPSU
  - 23.8.4. Latin America
  - 23.8.5. The Birth of the European Common Market
  - 23.8.6. The Beginning of Détente in the 1960s
  - 23.8.7. The Permanence of Conflict: Latin America and Vietnam
  - 23.8.8. Africa and Independence
  - 23.8.9. Conflict in the Middle East: From the Six Day War to Yom Kippur
- 23.9. From the Oil Crisis to the Year 2000
  - 23.9.1. A Decade in Review
  - 23.9.2. Social and Economic Consequences of the Oil Crisis
  - 23.9.3. Europe and Latin America in the 1970s
  - 23.9.4. U.S. Policy and East-West Relations in the Height of Détente
  - 23.9.5. Meaning of "Thatcherism" and "Reaganism"
  - 23.9.6. The End of Détente
  - 23.9.7. The New Global Order
  - 23.9.8. The European Union
  - 23.9.9. Africa after the Cold War
- 23.10. Text Commentary
  - 23.10.1. Steps to Follow in Text Commentary
  - 23.10.2. Example of Text Commentary
  - 23.10.3. Commentary



**Module 24. Physical Geography**

- 24.1. Planet Earth
  - 24.1.1. The Shape of the Earth
  - 24.1.2. Earth and the Solar System
- 24.2. Terrestrial Structure and Dynamics
  - 24.2.1. Introduction
  - 24.2.2. The Structure of Earth
  - 24.2.3. Terrestrial Dynamics
- 24.3. Structural Terrain
  - 24.3.1. Ocean Basins
  - 24.3.2. Landmasses
  - 24.3.3. Structural Terrain of Sedimentary Basins
  - 24.3.4. Appalachian Terrain
  - 24.3.5. Faulted Terrain
  - 24.3.6. Volcanic Terrain
- 24.4. Lithological Morphologies
  - 24.4.1. Granitic Terrain
  - 24.4.2. Karst Geomorphology
  - 24.4.3. Groundwater Circulation
- 24.5. Geomorphology due to External Forces I
  - 24.5.1. External Forces
  - 24.5.2. Weathering
  - 24.5.3. Slope Dynamics
  - 24.5.4. Erosion
- 24.6. Climatic Elements and Factors
  - 24.6.1. Objectives
  - 24.6.2. Introduction
  - 24.6.3. The Atmosphere
  - 24.6.4. Climate Factors
  - 24.6.5. Climate Elements
- 24.7. The Oceans
  - 24.7.1. Ocean Currents
  - 24.7.2. Atmosphere and Ocean
- 24.8. Climate Classification
  - 24.8.1. Introduction
  - 24.8.2. Köppen Classification
  - 24.8.3. Azonal Climates
  - 24.8.4. Zonal Climates
- 24.9. Guidance for Practical Exercises on Physical Geography
  - 24.9.1. Geographic Landscape Commentary
  - 24.9.2. Commentary Models
  - 24.9.3. The Main Charts in Physical Geography
- 24.10. Techniques and Guidelines to Study Geography
  - 24.10.1. Natural Resources
  - 24.10.2. Environmental Impact
  - 24.10.3. Principal Environmental Problems
  - 24.10.4. Positions on the Problems
  - 24.10.5. Ecological Footprint
  - 24.10.6. Natural Risks

## Module 25. Human Geography

- 25.1. The Population
  - 25.1.1. Distribution and Dynamism
  - 25.1.2. Population growth
  - 25.1.3. Demographic Transition Model
  - 25.1.4. Population Movement
  - 25.1.5. Population Structure
- 25.2. Rural Areas
  - 25.2.1. The World and Rural Areas
  - 25.2.2. Economic Activity
  - 25.2.3. Problems in Rural Areas
  - 25.2.4. Depopulation and Economic and Environmental Problems
- 25.3. Cities and Urban Areas
  - 25.3.1. Introduction
  - 25.3.2. Morfoligical
  - 25.3.3. Globalization
- 25.4. Transportation Systems
  - 25.4.1. Introduction
  - 25.4.2. History, Classification and Economics
  - 25.4.3. Configuration and Features of Transportation Networks
  - 25.4.4. Transport System Flows and Problems
- 25.5. Economic Activity
  - 25.5.1. Objective
  - 25.5.2. Introduction
  - 25.5.3. Economic Activity Location by Sector
  - 25.5.4. Economic Problems
  - 25.5.5. Economic Policies
- 25.6. State Organization
  - 25.6.1. Territorial Distribution (Borders, Capital City, Political-Administrative Structure)
  - 25.6.2. International Relations
  - 25.6.3. Flipboard as a Classroom Asset
- 25.7. Society and Culture
  - 25.7.1. Organized Civil Society
  - 25.7.2. Citizen Participation: Associations
  - 25.7.3. Cultural Landscapes: Dynamism and Transformation
- 25.8. Tourism
  - 25.8.1. Economics and Tourism
  - 25.8.2. Economics of Tourism
  - 25.8.3. Types of Tourism
  - 25.8.4. D.A.F.O. Analysis
  - 25.8.5. The Current and Future Reality of Tourism
- 25.9. Tools to Study Geography
  - 25.9.1. Tools, Outlines and Maps
  - 25.9.2. Geographic Information Systems (GIS)
  - 25.9.3. ICT Tools to Teach Geography
- 25.10. The Impact of Human Activity
  - 25.10.1. Historical Development of Human Activity in the Environment
  - 25.10.2. Vegetation Degradation
  - 25.10.3. Soil Destruction
  - 25.10.4. Overexploitation
  - 25.10.5. Pollution

## Module 26. Art History Within the Social Sciences

- 26.1. Concept of Social Science
  - 26.1.1. Social Sciences
  - 26.1.2. The Concept of Art
  - 26.1.3. Art as a Subject of Study, Social Document and Heritage
  - 26.1.4. Artistic Typologies

- 26.2. The Concept of Ancient, Medieval, Modern and Contemporary Art
  - 26.2.1. Historical References
  - 26.2.2. Location and Artistic Evolution
- 26.3. Ancient Art
  - 26.3.1. Prehistoric
  - 26.3.2. Middle East
  - 26.3.3. Egyptian
  - 26.3.4. Classical: Greece and Roma
- 26.4. Medieval Art
  - 26.4.1. Byzantine
  - 26.4.2. Islamic and Mudejar
  - 26.4.3. Pre-Romanesque
  - 26.4.4. Romanesque
  - 26.4.5. Gothic
- 26.5. Modern Art
  - 26.5.1. Renaissance
  - 26.5.2. Baroque and Rococo
- 26.6. Contemporary Art
  - 26.6.1. Neoclassicism and Romanticism
  - 26.6.2. From Realism to Modernism
  - 26.6.3. Vanguard
  - 26.6.4. Art in the 20th Century

### Module 27. The Importance of Teaching in Art History

- 27.1. Art History as an Academic Discipline
  - 27.1.1. The Teaching of Historical Time
  - 27.1.2. Its Place in the Humanities
  - 27.1.3. Knowledge of Change, Continuity and Permanence
- 27.2. The Art Historian as a Teacher
  - 27.2.1. Academic Profile of Art Historians
  - 27.2.2. Art Historian as a Researcher and Teacher
  - 27.2.3. Career Opportunities and the Importance of Knowledge of Art and Heritage

- 27.3. Changes in the Conception of the Teaching Approach to Social Sciences
  - 27.3.1. From Memorization to More Didactic Teaching
  - 27.3.2. Changes in Workbooks and Textbooks
- 27.4. Interdisciplinarity
  - 27.4.1. Auxiliary Sciences of Art History
  - 27.4.2. The Need for Cooperation between Different Subjects
- 27.5. A Discipline of the Past, for the Present and the Future
  - 27.5.1. Historical Sources and Art as a Source of Knowledge
  - 27.5.2. The Importance of Art from an Early Age
  - 27.5.3. The Need to Expand the Discipline in Educational Curricula
- 27.6. The Value of Humanistic Knowledge Today
  - 27.6.1. Crisis of the Humanities
  - 27.6.2. The Humanities and Their Work in Our Society
  - 27.6.3. Conclusion and Reflection on the Role of the Humanities in the Western World

### Module 28. Music Didactics

- 28.1. Introduction
  - 28.1.1. Introduction
  - 28.1.2. Music in Ancient Greece
  - 28.1.3. The Greek Ethos
  - 28.1.4. Epic Poetry: Homer
    - 28.1.4.1. The Iliad
    - 28.1.4.2. The Odyssey
  - 28.1.5. From Myth to Logos
  - 28.1.6. Pythagoreanism
  - 28.1.7. Music and Healing
- 28.2. Main Musical Methodologies
  - 28.2.1. Dalcroze Method
    - 28.2.1.1. Description of the Method
    - 28.2.1.2. Main Features
  - 28.2.2. Kodaly Method
    - 28.2.2.1. Description of the Method

- 28.2.2.2. Main Features
- 28.2.3. Willems Method
  - 28.2.3.1. Description of the Method
  - 28.2.3.2. Main Features
- 28.2.4. Orff Method
  - 28.2.4.1. Description of the Method
  - 28.2.4.2. Main Features
- 28.2.5. Suzuki Method
  - 28.2.5.1. Description of the Method
  - 28.2.5.2. Main Features
- 28.3. Music and Corporal Expression
  - 28.3.1. The Musical Experience through Movement
  - 28.3.2. Rhythmic-Corporal Expression
  - 28.3.3. Dance as a Teaching Resource
  - 28.3.4. Relaxation Techniques and their Relation with Musical Learning
- 28.4. Playing with Music as a Learning Activity
  - 28.4.1. What is Playing?
  - 28.4.2. Game Features
  - 28.4.3. Benefits of Playing
  - 28.4.4. Playing with Music
    - 28.4.4.1. Resources for Playing with Music
- 28.5. Main Differences between Music Education for Children and Music Education for Adults
  - 28.5.1. Music Education in Children
  - 28.5.2. Music Education for Adults
  - 28.5.3. Comparative Study
- 28.6. Educational Resources for Music Education for Children: Musicograms and Musical Stories
  - 28.6.1. Musicograms
  - 28.6.2. Musical Stories
    - 28.6.2.1. The Elaboration of Texts in Musical Stories
    - 28.6.2.2. Musical Adaptation of the Texts
- 28.7. Educational Resources for Music Education for Adults
  - 28.7.1. Introduction
  - 28.7.2. Main Educational Resources for Adults

## Module 29. Material Resources for Music Education

- 29.1. Introduction
  - 29.1.1. The Change From Analogue to Digital
  - 29.1.2. Open Educational Resources as a Basis for Student Equity
  - 29.1.3. Education for All and its Relation to the New Technologies
  - 29.1.4. Some Educational Models based on OER
    - 29.1.4.1. Open Learn (United Kingdom)
    - 29.1.4.2. The OpenCourseWare Worldwide Consortium (OCW)
    - 29.1.4.3. Digital Educational Platforms
    - 29.1.4.4. Open Materials for the Training of University Staff in E-Learning and Learning Object Repositories
    - 29.1.4.5. *Open E-Learning Content Observatory Services*
  - 29.1.5. Materials and Resources for Music Learning
- 29.2. Music Learning Materials
  - 29.2.1. Characteristics of the Music Learning Materials
  - 29.2.2. Types of Material
- 29.3. Non-Musical Material Resources
  - 29.3.1. Main Non-Musical Material Resources
  - 29.3.2. The Use of New Technologies in the Learning of Music
    - 29.3.2.1. Some Technological Resources
      - 29.3.2.1.1. Digital Tablets
      - 29.3.2.1.2. Computers
      - 29.3.2.1.3. Web Applications and Resources
- 29.4. Musical Teaching Resources
  - 29.4.1. Main Teaching Resources
  - 29.4.2. Musical Instruments in the Classroom
  - 29.4.3. Musicograms in Pre-School and Primary Education
    - 29.4.3.1. Characteristics of the Musicogram
  - 29.4.4. The Songbooks
    - 29.4.4.1. Main Characteristics of Songbooks
    - 29.4.4.2. Popular Songs

- 29.4.4.3. Importance of the Culture in Musical Learning
- 29.5. Resources for Dance Learning
  - 29.5.1. Importance of Dance in Music Learning
  - 29.5.2. Main Resources
    - 29.5.2.1. Adaptation of the Classroom to Dance Learning
- 29.6. Musical Instruments and other Sonorous Elements for Music Learning
  - 29.6.1. The Body as an Musical Instrument
  - 29.6.2. Percussion Instruments in the Classroom
    - 29.6.2.1. Characteristics of the Percussion Instruments
    - 29.6.2.2. Percussion Instruments Most Commonly Used in the Classroom
    - 29.6.2.3. Music Education through Percussion Instruments
  - 29.6.3. Reed Instruments and their Importance in Musical Learning
    - 29.6.3.1. Xylophones and Marimbas
    - 29.6.3.2. Characteristics of Reed Instruments
    - 29.6.3.3. Music Education through Reeds
  - 29.6.4. Wind Instruments: the Recorder Flute
    - 29.6.4.1. Characteristics of the Recorder Flute
    - 29.6.4.2. Music Education through the Recorder Flute
- 29.7. Importance of the Audio-Visual Material for Musical Learning
  - 29.7.1. Digital Blackboards as a Tool for Musical Learning
  - 29.7.2. Audiovisual Material Resources

## Module 30. Instrumentation for Music Education

- 30.1. Introduction
  - 30.1.1. Concept of Musical Instruments
    - 30.1.1.1. Definition
    - 30.1.1.2. Types of Musical Instruments
  - 30.1.2. Instrumentation throughout History
    - 30.1.2.1. Historical Review
    - 30.1.2.2. The Instrument as an Artistic Object
  - 30.1.3. Instrumentation in the Classroom Context
    - 30.1.3.1. The Acquisition of Competences
- 30.2. What is Musical Instrumentation?
  - 30.2.1. Up to J.S. Bach
    - 30.2.1.1. Treatises on Instrumentation
  - 30.2.2. From J.S. Bach
    - 30.2.2.1. Treatises on Instrumentation
- 30.3. Aspects of Instrumentation
  - 30.3.1. Pitch and Musical Timbre
    - 30.3.1.1. Tessitura of the Instruments
  - 30.3.2. Chords
    - 30.3.2.1. Construction
    - 30.3.2.2. Tonal Functions
- 30.4. Orff Instruments. Technical Knowledge of the Instruments in the Music Classroom
  - 30.4.1. Reed Instruments
    - 30.4.1.1. Family. Features
  - 30.4.2. Small Percussion
    - 30.4.2.1. Membranophones
    - 30.4.2.2. Idiophones
    - 30.4.2.3. Shaken Instruments
- 30.5. Musical Instrumentation in Stringed Instruments
  - 30.5.1. Plucked String
    - 30.5.1.1. The Guitar
  - 30.5.2. The Plucked String
    - 30.5.2.1. The Piano
- 30.6. Musical Instrumentation for Recorder Flute
  - 30.6.1. Types of Recorder Flutes
    - 30.6.1.1. Flutes in Folklore
    - 30.6.1.2. Recorder
- 30.7. Percussion Instruments in the Classroom
  - 30.7.1. The Orff Family

- 30.7.1.1. Uses
- 30.7.1.2. Correct Positions of Instrumental Execution
- 30.7.2. Small Percussion
  - 30.7.2.1. Execution Techniques
- 30.8. Instrumentation for Reeds
  - 30.8.1. Types of Drumsticks
    - 30.8.1.1. Uses
    - 30.8.1.2. Sonorities
  - 30.8.2. Use of Chords
    - 30.8.2.1. With 2 Sticks
    - 30.8.2.2. With 3 Sticks
  - 30.8.3. Melodic Function
    - 30.8.3.1. Introductory Exercises
    - 30.8.3.2. Attack Techniques and Expressiveness
- 30.9. Review of the Contents Covered
  - 30.9.1. Adaptation of Classroom Instruments
  - 30.9.2. Important Factors in Classroom Didactics

## Module 31. History of Musical Learning

- 31.1. Introduction: the Importance of Music in History
  - 31.1.1. Baroque
    - 31.1.1.1. Characteristics of the Period
  - 31.1.2. Classicism
    - 31.1.2.1. Characteristics of the Period
  - 31.1.3. Romanticism
    - 31.1.3.1. Characteristics of the Period
  - 31.1.4. Modern or Contemporary Music
    - 31.1.4.1. Characteristics of the Period
- 31.2. Music Education in History
  - 31.2.1. The Music Teacher in the Different Historical Periods
    - 31.2.1.1. The Role of the Teacher in the Baroque Period

- 31.2.1.2. The Role of the Teacher in the Classical Period
- 31.2.1.3. The Music Teacher in the Romanticism Period
- 31.2.1.4. The Music Teacher in the Present Day
- 31.2.2. The Emergence of the Conservatory
  - 31.2.2.1. The Beginnings and Origins
  - 31.2.2.2. The Conservatory as a Place of Intervention for Children at Risk of Social Exclusion
  - 31.2.2.3. The Conservatory Today
  - 31.2.2.4. New Spaces for Musical Learning
- 31.3. Music Education in the 20th Century
  - 31.3.1. Introduction
  - 31.3.2. A Traditional Model Based on Imposition
  - 31.3.3. A Change of Perspective: Towards Participatory, Non-Imposing Methodologies
- 31.4. Current Educational Paradigms applied to Music Education
  - 31.4.1. Introduction
  - 31.4.2. New Methodologies applied to Music Education
    - 31.4.2.1. Cooperative Learning and Music Learning
      - 31.4.2.1.1. What is Cooperative Learning?
      - 31.4.2.1.2. The Characteristics of Cooperative Learning
    - 31.4.2.2. PBL: Project-Based Learning
      - 31.4.2.2.1. What Is PBL?
      - 31.4.2.2.2. Characteristics of Project-Based Learning
    - 31.4.2.3. Gamification in the Music Classroom
      - 31.4.2.3.1. What is Gamification?
      - 31.4.2.3.2. Characteristics of Gamification

## Module 32. Evaluation of Music Students

- 32.1. Introduction
  - 32.1.1. General Aspects
  - 32.1.2. References
- 32.2. What is to Evaluate?

- 32.2.1. Preliminary Considerations
- 32.2.2. Main Definitions of the Evaluation Process
- 32.2.3. Features of the evaluation
- 32.2.4. The Role of Evaluation in the Teaching-Learning Process
- 32.3. What Should Be Evaluated in the Musical Area?
  - 32.3.1. Knowledge
  - 32.3.2. Skills
  - 32.3.3. Skills
- 32.4. Pre-Evaluation Guidelines and Criteria
  - 32.4.1. Evaluation Functions
  - 32.4.2. Educational Programming
    - 32.4.2.1. What is Educational Programming
  - 32.4.3. Why Pre-Programming?
- 32.5. Evaluation Tools and Instruments
  - 32.5.1. Observation as an Evaluation Tool
    - 32.5.1.1. Participant Observation
    - 32.5.1.2. Indirect Observation
  - 32.5.2. Portfolio
    - 32.5.2.1. What is a Portfolio?
    - 32.5.2.2. Characteristics of the Portfolio
  - 32.5.3. The class diary
    - 32.5.3.1. What is a Class Journal?
    - 32.5.3.2. Parts of a Class Journal
  - 32.5.4. The Debate
    - 32.5.4.1. What is Debating?
    - 32.5.4.2. Importance of the Debate in the Educational Process
    - 32.5.4.3. Considerations Prior to the Debate
  - 32.5.5. Conceptual Maps
    - 32.5.5.1. What is a Concept Map?
    - 32.5.5.2. Main Elements of the Concept Map
    - 32.5.5.3. ICT Tools for the Elaboration of Concept Maps
  - 32.5.6. The Objective Evaluation Tests
    - 32.5.6.1. Completion or Simple Recall Tests
    - 32.5.6.2. Matching

- 32.5.6.3. Ordering Tests
- 32.5.6.4. Exercises of Answers with Alternatives
- 32.5.6.5. Multiple Solution
- 32.6. Musical Evaluation Applied to the New Technologies
  - 32.6.1. Kahoot and Other Virtual Evaluation Resources

## Module 33. Current Methods

- 33.1. Difficulties of Teaching Art History
  - 33.1.1. Social and Political Vision
  - 33.1.2. Nature as a Social Science
  - 33.1.3. Student Body Interest
- 33.2. Teaching Methodology
  - 33.2.1. Definition of Teaching Methodology
  - 33.2.2. Methodology Efficacy
  - 33.2.3. Traditional and Modern Methodologies
- 33.3. Teaching-Learning Models
  - 33.3.1. Dimensions of Psychoeducational Knowledge
  - 33.3.2. Models of the Teaching-Learning Process
  - 33.3.3. Instructional Design
- 33.4. Lectures and Teacher Role
  - 33.4.1. Positive Aspects of Lectures
  - 33.4.2. Negative Aspects of Lectures
  - 33.4.3. Lectures Today
- 33.5. Behavioral Learning Theories and Educational Applications
  - 33.5.1. Classical conditioning
  - 33.5.2. Operant Conditioning
  - 33.5.3. Vicarious Conditioning/Observational Learning
- 33.6. Cognitive Theories and Constructivist Theories
  - 33.6.1. Classical Theories of School Learning
  - 33.6.2. Cognitive Theories of Information Processing
  - 33.6.3. Constructivism
- 33.7. Methodologies for Developing Competencies
  - 33.7.1. Problem-based Learning

- 33.7.2. Case Studies
- 33.7.3. Project-Based Learning
- 33.7.4. Cooperative Learning
- 33.8. Teaching Methodology Applied to Social Sciences
  - 33.8.1. Teachers as a Key Methodological Element
  - 33.8.2. Expository Strategies
  - 33.8.3. Inquiry Strategies

### Module 34. Student Motivation

- 34.1. Motivation and Its importance to Learners
  - 34.1.1. The Reason to Seek Motivation
  - 34.1.2. The Promotion of Curiosity in Social Sciences
  - 34.1.3. Positive Reinforcement and Autonomy Reinforcement
- 34.2. Teacher Role in the Motivational Task
  - 34.2.1. What to Do as Teachers to Become a Motivational Instrument?
  - 34.2.2. Proposal of Activities or Projects of Interest
  - 34.2.3. Recourse to Current Events: Example
- 34.3. Cognitive Theories
  - 34.3.1. Conceptual and Procedural Knowledge
  - 34.3.2. Intellectual Abilities and General Strategies
  - 34.3.3. Rosenshine and Stevens
- 34.4. Cognitive Theories II
  - 34.4.1. Different Opinions
  - 34.4.2. Activity Examples
  - 34.4.3. Situated Learning and Learner Engagement
- 34.5. Learning and Self-Learning
  - 34.5.1. Research Work for the Students
  - 34.5.2. Students as Their Own Teachers
  - 34.5.3. Transversal Projects
- 34.6. Motivation in Adolescence
  - 34.6.1. Understanding Adolescents
  - 34.6.2. Assessing the Classroom Situation
  - 34.6.3. Conflict Mediators

- 34.7. New Technologies as a Key Element in Academic Motivation
  - 34.7.1. Using Social Media
  - 34.7.2. Understanding Students' Social Reality and Their Motivations
  - 34.7.3. Evolution of the Youth
- 34.8. Attributional Programs
  - 34.8.1. What does it consist of?
  - 34.8.2. Real Applications
  - 34.8.3. Advantages in Adolescence
- 34.9. Self-Regulated Learning Theory
  - 34.9.1. What does it consist of?
  - 34.9.2. Real Applications
  - 34.9.3. Project-Based Education and Motivation

### Module 35. Adapting to Different Classroom Situations and Multiple Intelligences

- 35.1. Adolescence and High School Education
  - 35.1.1. Most Problematic Years
  - 35.1.2. Adolescents at Risk of Social Exclusion
  - 35.1.3. Teachers, but Also Educators
- 35.2. Dysfunctions in Adolescence
  - 35.2.1. Different Problems
  - 35.2.2. Potential Solutions as Teachers and Educators
  - 35.2.3. Real Examples and Solutions
- 35.3. School Maladjustment
  - 35.3.1. School Absenteeism and Causes
  - 35.3.2. School Failure
  - 35.3.3. Situation in Spain
- 35.4. High Capacity Students
  - 35.4.1. Additional Material
  - 35.4.2. Motivation and New Challenges
  - 35.4.3. On How to Avoid Exclusion
- 35.5. Multiple Intelligences and Education
  - 35.5.1. Theory of Multiple Intelligences
  - 35.5.2. Types of Intelligence
  - 35.5.3. Project Zero



- 35.6. Education Based on Multiple Teachings
  - 35.6.1. Galton
  - 35.6.2. Cattell
  - 35.6.3. Wechler
- 35.7. Strategies, Guidelines and Activities
  - 35.7.1. According to Piaget
  - 35.7.2. Establish Student Abilities and Skills
  - 35.7.3. Skill Reinforcement
- 35.8. Social Sciences and Multiple Intelligences
  - 35.8.1. Linguistic Intelligence and Reasoning in Learning History
  - 35.8.2. Spatial Intelligence and Logic in Learning Geography
  - 35.8.3. Plastic and Artistic Intelligence
- 35.9. Problems in a More Personalized Approach to Education
  - 35.9.1. Lack of Resources
  - 35.9.2. The Need for Greater Investment
  - 35.9.3. Required Resources

## Module 36. ICT

- 36.1. What are ICTs? Use in Education
  - 36.1.1. Definition of ICT
  - 36.1.2. Advantages
  - 36.1.3. Digital Competencies in Educational Settings
- 36.2. ICT Use in High School
  - 36.2.1. Digital Tools
  - 36.2.2. Web-Based Tools
  - 36.2.3. Mobile Devices
- 36.3. Social media
  - 36.3.1. Definition of Social Networks
  - 36.3.2. Main Social Media Outlets
  - 36.3.3. Using Social Networks in Education
- 36.4. Geographic Information System (GIS) and Its Importance in the Geography
  - 36.4.1. GIS: What Are They?
  - 36.4.2. GIS Organisation and Structures
  - 36.4.3. GIS in Education

- 36.5. ICT in Teaching-- Learning History and Geography
  - 36.5.1. Web Resources of Historical and Geographical Interest
  - 36.5.2. Interactive Websites
  - 36.5.3. Gamification
- 36.6. Introduction to Developing Digital Teaching Material
  - 36.6.1. Creating and Editing Videos
  - 36.6.2. Creating Presentations
  - 36.6.3. Creating Educational Games (Gamification)
  - 36.6.4. Creating 3D Models
  - 36.6.5. Google Tools
- 36.7. Use and publication of Digital Teaching Materials
  - 36.7.1. Means of Publishing Audiovisual Resources
  - 36.7.2. Means of Publishing Interactive Resources
  - 36.7.3. Augmented Reality in the Classroom
- 36.8. Critical Spirit in the Use of Web Resources
  - 36.8.1. Student Education in the Use of New Technologies
  - 36.8.2. The Problem of Privacy Online
  - 36.8.3. Treating Information on the Internet Critically
- 36.9. ICT Teaching Materials in Teaching History and Geography
  - 36.9.1. First Cycle of Secondary Education (Middle School)
  - 36.9.2. Second Cycle of Secondary Education (High School)
  - 36.9.3. Baccalaureate (High School)

## Module 37. Educational Programming

- 37.1. What Does Programming Consist of?
  - 37.1.1. Different Meanings
  - 37.1.2. Programming as a Teacher Guide
  - 37.1.3. Different Types of Programs according to Academic Year
- 37.2. Educational Programming and Its Different Sections
  - 37.2.1. Objectives
  - 37.2.2. Contents
  - 37.2.3. Learning Standards
- 37.3. Teaching Units and Sections
  - 37.3.1. Contents
  - 37.3.2. Objectives
  - 37.3.3. Sample Activities and Suggested Tasks
  - 37.3.4. Attention to Diversity Spaces and Resources. Assessment Procedures. Assessment Tools
- 37.4. Different Educational Curricula according to Autonomous Communities
  - 37.4.1. Comparison between Communities
  - 37.4.2. Common Elements in Curricula
  - 37.4.3. Differences between ESO and Bachillerato
- 37.5. Useful Bibliography for Educational Programming
  - 37.5.1. Ausubel
  - 37.5.2. Piaget
  - 37.5.3. Combas Project
- 37.6. Possible Strategies when Defending an Educational Program or Unit
  - 37.6.1. On How to Face the Presentation
  - 37.6.2. Defense Models
  - 37.6.3. Annexes and Materials that Can Be Enclosed
- 37.7. Examinations, Possible Approaches
  - 37.7.1. Multiple-Choice Tests
  - 37.7.2. Examinations of Medium or Long Development
  - 37.7.3. Advantages and Disadvantages of Each and Elaborating Mixed Examinations

- 37.8. Headings
  - 37.8.1. Examples and Templates
  - 37.8.2. Uses
  - 37.8.3. Templates or Rubrics as Tools for Improvement
- 37.9. Activities, Exercises, Tasks and the Different Levels of Complexity
  - 37.9.1. Differences and Examples
  - 37.9.2. Self-study
  - 37.9.3. Self-Assessment Exercise Plans
- 37.10. Importance of the 2nd year in Baccalaureate
  - 37.10.1. A Decisive Year and What It Means for Students
  - 37.10.2. On How to Guide Students
  - 37.10.3. Features

## Module 38. Assessment

- 38.1. Assessment Objectives
  - 38.1.1. Search for Problems or Deficiencies
  - 38.1.2. Establish Solutions
  - 38.1.3. Improve Teaching-Learning Process
- 38.2. Criteria to be Followed
  - 38.2.1. Preliminary Assessment
  - 38.2.2. Establishing the Most Adequate System
  - 38.2.3. Extraordinary Tests
- 38.3. Different Assessment Models
  - 38.3.1. Final Assessment
  - 38.3.2. Continuous
  - 38.3.3. Tests and Exams
- 38.4. Cases and Practical Examples
  - 38.4.1. Different Exam Models
  - 38.4.2. Different Headings
  - 38.4.3. Cumulative or Percentage Grading
- 38.5. The Importance of the Assessment System
  - 38.5.1. Different Systems according to the Features of the Student Body
  - 38.5.2. Function of Assessment Criteria
  - 38.5.3. List and Features of Assessment Techniques and Tools

- 38.6. LOMCE y evaluación
  - 38.6.1. Assessment Criteria
  - 38.6.2. Standards
  - 38.6.3. Differences between Assessment in ESO and Bacalaureate
- 38.7. Different Authors, Different Visions
  - 38.7.1. Zabalza
  - 38.7.2. Weiss
  - 38.7.3. Our Own Assessment Project
- 38.8. Different Realities, Different Assessment Systems
  - 38.8.1. Preparing an initial assessment: examples and templates
  - 38.8.2. Establishing Teaching Plans
  - 38.8.3. Checking Learning by Means of Tests
- 38.9. Self-Assessment as Teachers
  - 38.9.1. Questions to Ask Ourselves
  - 38.9.2. Analyzing Our Own Results
  - 38.9.3. Improving for the Next Academic Year

## Module 39. Teaching Outside the Classroom

- 39.1. History and Archaeology Museums
  - 39.1.1. History in Museums
  - 39.1.2. Archaeology Museums
  - 39.1.3. History Museums
- 39.2. Museums and Art Galleries
  - 39.2.1. Art in Museums
  - 39.2.2. Art Museums
  - 39.2.3. Art Galleries
- 39.3. Museum Accessibility
  - 39.3.1. The Concept of Accessibility
  - 39.3.2. Eliminating Physical Barriers
  - 39.3.3. Visual and Cognitive Integration of Art and Heritage
- 39.4. Archaeological Heritage
  - 39.4.1. Archaeological Objects
  - 39.4.2. Archaeological Sites
  - 39.4.3. The Value of Archaeological Heritage

- 39.5. Artistic Heritage
  - 39.5.1. The Concept of Work of Art
  - 39.5.2. Movable Works of Art
  - 39.5.3. Historic-Artistic Monuments
- 39.6. Historical and Ethnological Heritage
  - 39.6.1. Ethnological Heritage
  - 39.6.2. Historical Ensembles
  - 39.6.3. Historic Sites and Historic Gardens
- 39.7. Museology, Museography and Teaching
  - 39.7.1. Concept of Museology
  - 39.7.2. Concept of Museography
  - 39.7.3. Museums and Teaching
- 39.8. The School in the Museum
  - 39.8.1. School Visits to Museums
  - 39.8.2. Museums at School
  - 39.8.3. Coordination and Communication between School and Museum
- 39.9. Heritage and School
  - 39.9.1. Heritage Outside the Museum
  - 39.9.2. Adapting Visits
  - 39.9.3. Combination of Activities
- 39.10. Teaching in Museums through New Technologies
  - 39.10.1. New Technologies in Museums
  - 39.10.2. Augmented Reality
  - 39.10.3. Virtual reality



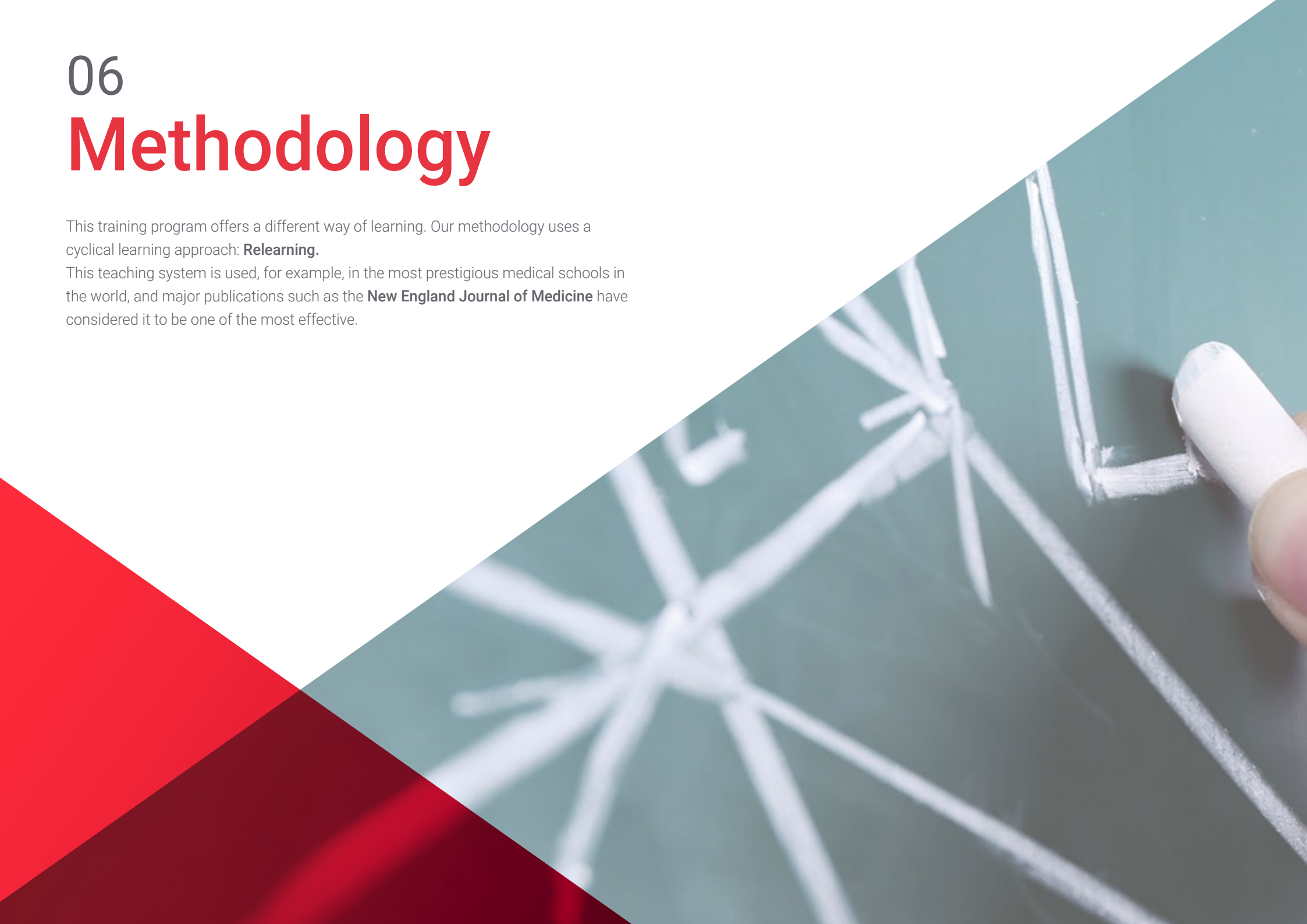
*It provides in-depth, high-quality supplementary readings and multimedia material on the most effective teacher learning, including up-to-date tools for your professional development"*

06

# Methodology

This training program offers a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





“

*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## At TECH Education School we use the Case Method

In a given situation, what should a professional do? Throughout the program students will be presented with multiple simulated cases based on real situations, where they will have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method.

*With TECH, educators can experience a learning methodology that is shaking the foundations of traditional universities around the world.*



*It is a technique that develops critical skills and prepares educators to make decisions, defend their arguments, and contrast opinions.*

“

*Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”*

The effectiveness of the method is justified by four fundamental achievements:

1. Educators who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
2. The learning process is solidly focused on practical skills that allow educators to better integrate the knowledge into daily practice.
3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life teaching.
4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.



## Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

Our University is the first in the world to combine case studies with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.



*Educators will learn through real cases and by solving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.*



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology we have trained more than 85,000 educators with unprecedented success in all specialties. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.*

In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

The overall score obtained by our learning system is 8.01, according to the highest international standards.



This program offers the best educational material, prepared with professionals in mind:



#### Study Material

All teaching material is produced by the specialist educators who teach the course, specifically for the course, so that the teaching content is really specific and precise. These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



#### Educational Techniques and Procedures on Video

TECH introduces students to the latest techniques, with the latest educational advances, and to the forefront of Education. All this, first-hand, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



#### Interactive Summaries

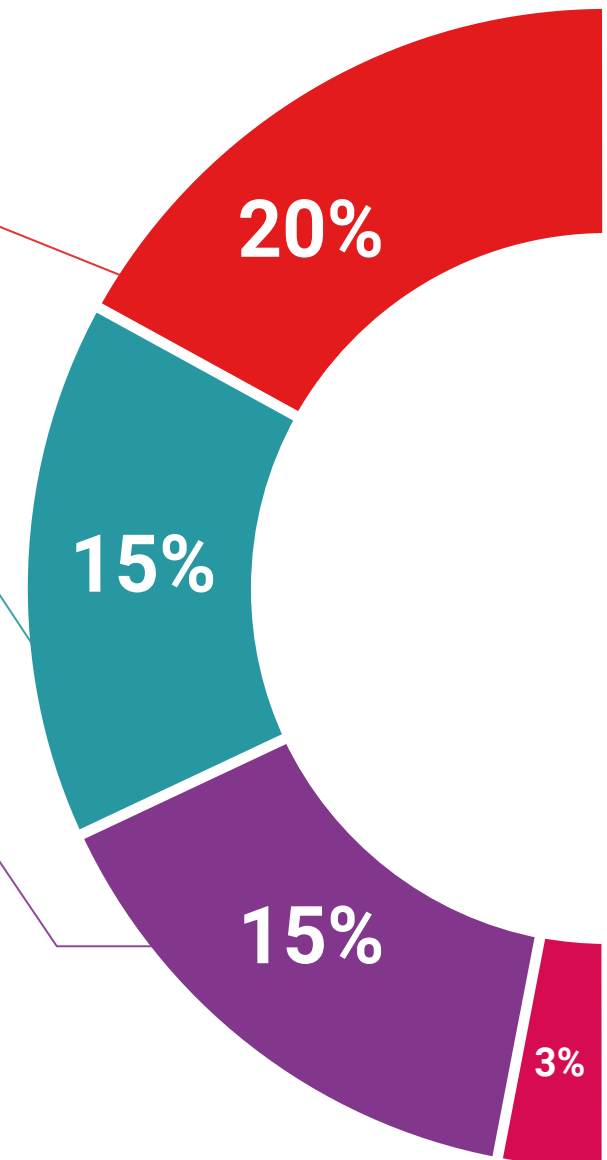
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive multimedia content presentation training Exclusive system was awarded by Microsoft as a "European Success Story".



#### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





#### Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



#### Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises: so that they can see how they are achieving your goals.



#### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



#### Quick Action Guides

TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical, and effective way to help students progress in their learning.



07

# Certificate

The Advanced Master's Degree in Didactics and Teaching Practice in Secondary Education guarantees, in addition to the most rigorous and up-to-date training, access to a Advanced Master's Degree awarded by TECH Global University.



“

*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork"*

This program will allow you to obtain your **Advanced Master's Degree diploma in Didactics and Teaching Practice in Secondary Education** endorsed by **TECH Global University**, the world's largest online university.

**TECH Global University** is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

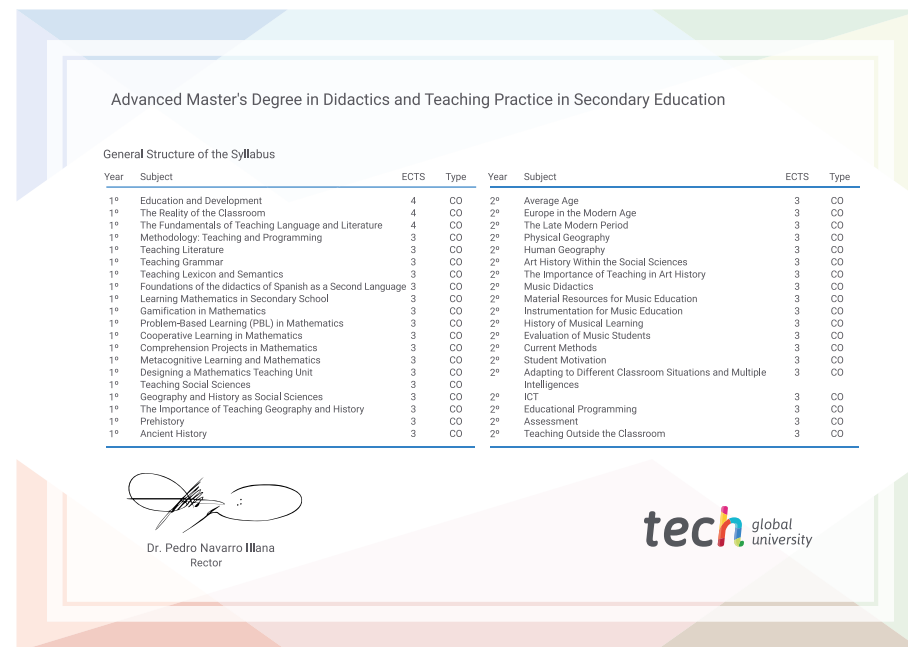
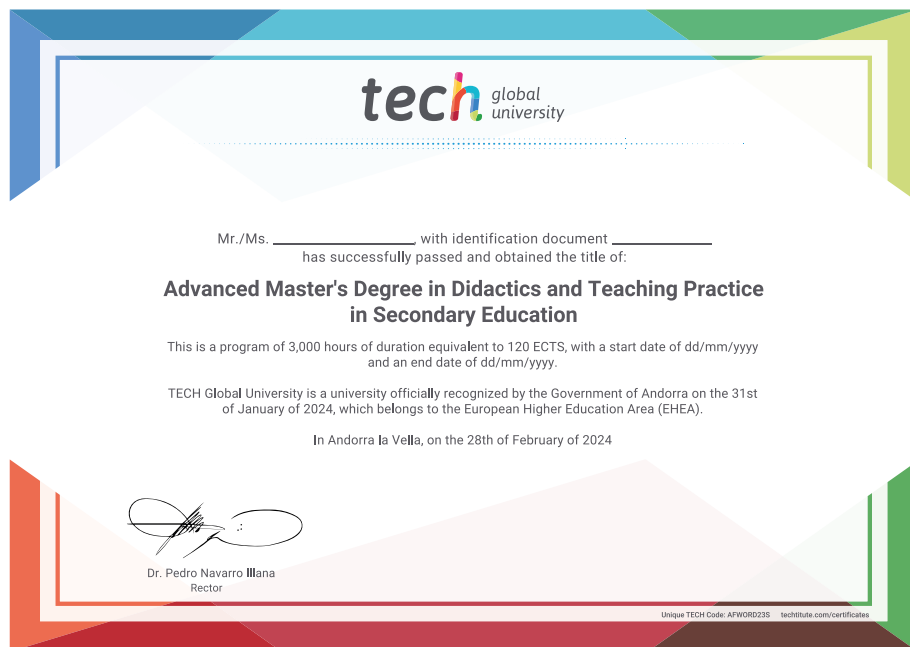
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Advanced Master's Degree in Didactics and Teaching Practice in Secondary Education**

Modality: **online**

Duration: **2 years**

Accreditation: **120 ECTS**



\*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.

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institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
development language  
virtual classroom



**Advanced Master's  
Degree**  
Didactics and Teaching  
Practice in Secondary  
Education

- » Modality: online
- » Duration: 2 years
- » Certificate: TECH Global University
- » Credits: 120 ECTS
- » Schedule: at your own pace
- » Exams: online

# Advanced Master's Degree

## Didactics and Teaching Practice in Secondary Education

