Department of Primary Education, University of Crete

Compulsory Courses

Α0Π01 INTRODUCTION TO PEDAGOGY

COURSE CONTENT

- Basic Pedagogical Terms.
- Critical Pedagogy - Teaching Implementations.
- Scientific Approaches to Education.
- Methodological Approaches to Education.
- The educator in the modern world.
- Educational research and contemporary approaches to teaching.
- Education and Meta-education.
- Educational Unionism.
- Educators' social enactment.
- Contemporary issues and concerns relating to education: a) citizens, multiculturalism, Roma education.
- Contemporary issues and concerns relating to education b) socialization, equity opportunities, gender and educators, violence and racism.
- Crisis and education, educational innovation, schools of the world.
- A proposal for the pedagogy of the 21st century: Anthropocentric Pedagogy.

Α06Π02 INTERCULTURAL EDUCATION AND HISTORICAL EDUCATION

COURSE CONTENT

The content of the course is oriented mainly towards the initiatives taken after the Second World War by UNESCO and the Council of Europe relating to the enterprise taken for the radical transformation of teaching, the revision of history textbooks and a new approach to history focusing on "the interdependence of peoples and cultures and their contribution to the heritage of the world.

The course will examine topics related to a thematic framework of issues concerning the study of intercultural history, such as:

- What is intercultural history? a. What should it be Included; b. What is the relationship between bias and objectivity? c. Should the history teachers share their own prejudices with their students? d. How the authors of the history book (s) collect their historical information;
- What is a political system? a. How is power formally distributed? b. How is power exercised informally? c. How should a political system link relation between classes, nation, nationality, gender?

- How people and societies are transformed? a. What is the difference between prejudice and example? b. Who are the characteristics of an example? c. How can people change themselves and the others; d. What is prejudice and what are its sources?
- What is the difference between a stereotype and a generalization?
- What is the extent and limits of a non-violent change?
- What is national security? a. Is violence innate or learned? b. How contemporary war conditions have changed with time? c. what is the meaning of the terms empire and ideology in the time of nuclear power? e. What standards of peace do they seem to be more effective?
- A cross-border history teaching method with basic categories of concepts, such as: pluralism, understanding of the foreigner, identity, human history, human rights and the contact of cultures is examined. A different perspective and sources of the present historical events are proposed in order for this multi perceptivity to be approached, which contributes to overcoming intolerant thinking and fostering dialogue between people of different cultural backgrounds.

A11П04 TEACHER EDUCATION THROUGH THE USE OF NEW TECHNOLOGIES (E-learning)

COURSE CONTENT

- Introduction to teacher training as an integral part of the adult education.
- Fundamental approaches to the pedagogical use of ICT and especially the Social Media in the teacher training.
- The basic characteristics of online training teacher settings (e-learning).
- Introduction to the concept of creativity in the society of Knowledge and Its link with the teacher training using ICT.
- Good teacher training practices using ICT in the Greek and the international settings.
- Methodology for designing teacher training environments with the use of ICT in the Greek and international settings.

A05П01 SOCIOLOGY OF EDUCATION: THE FORMATION OF THE 'HUMAN-CITIZEN'

COURSE CONTENT

- Introduction to the basic concepts of the course.
- Theoretical and research approaches to the subject matter.
- Contemporary and representative theories in the field of Sociology of Education.
- Crisis in society and Education and the development of a man- citizen.
- The creation of a human -citizen today: deadlocks and perspectives.
- The school as a tool in the creation of an anthropocentric approach to education and learning.
- Practices assisting in the development of a better human- citizen in society and education.

A08Π01 BILINGUALISM AND TEACHING GREEK AS L2

COURSE CONTENT

The course includes the following topics:

- Introduction to the issue of bilingualism (bilingualism as a global, social and Individual phenomenon)
- Dimensions of bilingualism.
- Linguistic use and development of bilingualism in bilingual communities.
- The acquisition of a L2 (learning theories, characteristics).
- Approaches to teaching a second language.
- The teaching of Greek as L2 and as a Foreign language (types of students, educational material, methodology).
- Theories about the relationship between bilingualism and learning.
- Teaching bilingual students in formal classrooms (models for supporting students with low knowledge of the Greek language so that their access to the Curriculum will be facilitated and their school and social inclusion will be successful).

B01Π01 INTRODUCTION TO PSYCHOLOGY

COURSE CONTENT

- Historical retrospection on the development of psychology, cognition and implementation of the research. Findings in legislation, education and daily lives.
- Schools of thought and branches of psychology.
- Research methods relating to psychological phenomena and ethics.
- Biological basics of behaviors and cognitive processes.
- The behaviorism movement: behaviorists, neo behaviorists, its impact on the way people are approached, its implementation in the school / classroom setting.
- Cognitive processes: attention, apprehension.
- Cognitive processes: memory.
- Cognitive processes: language and thinking.
- Motivation and emotions.
- Theories relating to personality development and psychopathology.
- Stress and health.
- Course deduction – recapitulation.

B02Π01 DEVELOPMENTAL PSYCHOLOGY (INFANCY, CHILDHOOD)

COURSE CONTENT

- The general principals of development.
- The physical, mental, psychosocial and sexual development during infant, toddler and school years.

- The biological and psychological birth of human beings.
- The psychological birth phases.
- Separation anxiety.
- The development of internal mother idol.
- The first association of the children.
- Transitive objects.
- The foundation of self.
- The theory of attachment.
- Emotional development and depravation.
- Child abuse, child aggression, excessive compliance, children's fears and school phobia.

B03П13 LEARNING AND TEACHING LITERACY SKILLS

COURSE CONTENT

- The contribution of the written language to the development of metacognitive skills, the promotion of school knowledge and improvement of the students –writers' social status.
- The role of metacognition and working memory in the production of written language and comprehension.
- Reading and writing terms. Written speech and its relation to information and communication.
- Reading, writing and the internet.
- Traditional and modern approaches to the written word.
- Theories - models of reading and writing production.
- Contemporary socio-cultural and socio-cognitive written word approaches.
- Textbooks. Text-centric-procedural approaches. Writing stages - writing and reading strategies.
- Types of literacy. Planning literacy events.
- Principles for structuring learning and teaching writing environments in the context of cognitive training.
- Collaborative writing and reading. Presentations of student work.
- The role of the teacher and the importance the facilitating procedures in the teaching of the written word.
- Presentations of student work –Review- Recapitulation.

B03П01 INTRODUCTION TO EDUCATIONAL PSYCHOLOGY

COURSE CONTENT

- Course presentation (thematic units and bibliography). Introduction to the subject of Educational Psychology.
- Basic Introductory Concepts: Development, Learning and Teaching.

- Developmental Theories: Piaget and Cognitive Development.
- Vygotsky and Cognitive Development.
- Behavioral Learning Theories (Pavlov, Thorndike, Skinner, Bandura & Meichenbaum).
- Information Processing Theories & Cognitive Theories Learning to build knowledge.
- Motivation: Theories, learning motivation.
- Extracurricular influences: Cultural context, social class and academic performance.
- Classroom diversity and students with special needs. Differentiated teaching and adaptation to individual needs.
- Classroom management and effective learning formation environment. Common misbehavior management strategies.
- Student-centered & neo-constructive approaches in teaching. Designing effective teaching and teaching strategies.
- Assessment of learning and assessment methods.
- Research methods and educational practice.

B05П07 INCLUSION OF STUDENTS WITH SPECIAL NEEDS / DISORDERS

COURSE CONTENT

- Introduction to basic definitions of disability. Discussion about the role and the difficulties facing the disabled people in modern society.
- Introduction to Inclusive Education. Basic terminology, philosophy, basic principles of inclusive education.
- Inclusive education. Discussion on the different ways of understanding and applying the inclusive education.
- The rights of the disabled children. Social exclusion Educational and social policy in Greece and internationally.
- Educational policy and integration in education. Greek and international educational policy for the education of students with disabilities and / or special educational needs.
- Disability Approach Models Medical and social models of understanding and managing disability.
- Forms and levels of integration and assimilation. Conditions for integration in the school environment. The role of the mainstream classrooms. The role of educational support. Academic, social and spatial integration. Advantages and disadvantages.
- Collaborative teaching Defining and understanding a new form of teaching in a school for everyone.
- Differentiated teaching Access to learning through differentiated teaching.
- Practical application of differentiated teaching.
- Laboratory lesson Presentation of assignments for differentiated teaching.
- Interdisciplinary collaboration and integration Roles and responsibilities of special and general education teachers through Interdisciplinary cooperation.
- Research methods and educational practice.

В06П01 RESEARCH METHODOLOGY IN THE EDUCATIONAL SCIENCES

COURSE CONTENT

- Course presentation (thematic units and bibliography). Assumptions and the nature of science. Regulatory and interpretive approaches.
- Basic concepts and stages of scientific research. Research design: Problematic research, purpose determination, research questions and hypotheses.
- Experimental planning in educational research.
- Overview: Sampling surveys and questionnaires. Sampling error.
- Flexible research projects: case studies, ethnographic studies, grounded theory studies.
- Educational action research.
- Observation Methods (participatory, structured, etc.).
- Interviews. Controls and scales for measuring approaches. Content analysis in educational research.
- Interpretation of data, drawing conclusions, ways of presentation research results.
- Ethics of educational research.
- The report of the investigation: Basic rules of scientific writing.
- Bibliographic review in educational research and the appropriate use of Bibliographic references. Plagiarism.

Г01П01 CURRICULUM. THEORY AND PRACTICE

COURSE CONTENT

- Course presentation (thematic units and bibliography). Conceptual approach of E C. Overview of curriculum definitions and the curriculum. Problems of conceiving and conceptualizing it. Sectors and fields of the curriculum. Curriculum theories.
- Ideology and hierarchy of school knowledge. Selection, ranking and "Legalization" of school / educational knowledge. Relationships between knowledge and power. The "Hidden" or implicit Curriculum.
- Theories and philosophies of the curriculum and overlapping school / educational functions (relation of the curriculum to the theories of the mind, learning, teaching, the use of teaching aids, assessment, etc.).
- Expertise of design and development of the curriculum. Structure and development of cognitive content by domains (e.g. language, history). Forms design and types of the curriculum Adaptation and personalization of the curriculum in the characteristics of students.
- Curricula and textbooks. Roles, characteristics, ideology, structure, functions. Procedures for preparation and /or selection of teaching material. Electronic forms of the textbook, multiple sources, e-curriculum, e-learning & e-media.
- The Curriculum in Greece and its peculiarities. The nature of cognition objects and the timetable in Greece over time. Critical interpretation, text analysis, deconstruction.
- The nature of speech in the curriculum. From nationalist ideology to supranational formations. Studies around the curriculum and textbooks in Greece.

- Problems and weaknesses of the Greek curriculum Legal texts, educational purposes, curriculum purpose, cognitive objects, etc. The asymptotic relationship between the various levels of the educational function. Effects on overlapping educational functions and ways of dealing with the phenomenon.
- Modern trends and research of the cognitive objects of the curriculum in different countries.
- Involvement of the teacher in the decision making for the implementation and adjustment of the curriculum and textbooks. The "mutation" of the teacher from simple "executor / implementer" of the program to "pedagogical authority". The integration of educational innovations in the curriculum and the implementation of the flexible zone. Possibilities, problems, limitations and difficulties.
- Curriculum and Europe. Search for multiple perspectives of the curriculum and of educational functions. The implementation and the ideology of Europeanism. Prospects for one common curriculum in a united Europe. Purposes, contents and searches at all times changing educational landscape. New trends and models of the curriculum.
- Evaluation of the curriculum and its overlapping functions. Forms of SP evaluation. Concepts, types, approaches, methodology, problems and deadlocks of evaluation of SP.

Γ02Π01 TEACHING THEORY AND METHODOLOGY

COURSE CONTENT

- Stipulating learning and teaching.
- The transition from teaching to learning.
- The teaching context and its constituent parts.
- Teaching models.
- Teaching strategies.
- Teaching skills in the transformative pedagogical context.
- Cognitive interests, curriculum and teaching approaches.
- The elements of a transformative teaching and learning model.
- Deconstruction and construction of a teaching unit |.
- Deconstruction and construction of a teaching unit ||.
- Reflective validation of the personal teaching and learning theories.
- Recapitulation.

Γ03Π10 INFORMATION AND COMMUNICATION TECHNOLOGIES IN EDUCATION FOR SUSTAINABLE DEVELOPMENT

COURSE CONTENT

Particular reference in the course is given to the social networking technologies of online collaborative concept mapping and other online tools in the production of integrated lesson plans for its integration sustainable development in the curriculum of primary – secondary education. In addition to deliveries, the course is supported by an online teaching and learning system with the required supporting teaching material and bibliography.

Course Units

- Introduction - Basic Concepts of Sustainable Development.
- Basic Concepts of ICT - Interactive Education and ICT - Use of Digital Reality in Education with Emphasis on Sustainability Development.
- Social networking technologies, internet collaborative conceptual Mapping, Presentation of web tools & Mobile Applications for the production of integrated lesson plans.
- Description of the 17 Objectives for the sustainable development of UNESCO, the 10 skills for the 21st Century and the 21st Century Learning Pillars.
- Sustainable justice, personal views, educational philosophy and interactive ICT-supported training.
- Critical social theory, Critical literacy and EBA, Critical pedagogy and transformative learning oriented to education for sustainable development or alternatively in education for sustainable justice.
- Presentation of the DeCoRe Plus model.
- Creation of a specific example using the DeCoRe plus model.
- Interactive education, ICT and sustainable development with emphasis on specific topics (eg climate change).
- Web exploration as an essential tool in a sustainable school - Presentation of Examples of ICT Applications for EBA (WikiQuESD, Digital Learning Scenarios, Digital Learning Objects, Digital Storytelling).
- The Interactive Whiteboard in Education and especially in Education for Sustainable development.
- Presentation of the Final project of the Course - Creation of Learning Intervention using the DeCoRe plus Model in an Interactive Whiteboard. Discussion on a Specific Example - Questions – Discussion.
- General Review of the Course - Drawing conclusions about the use of ICT in Education and especially in Education for Sustainable Development.

Δ01Π17 MODERN GREEK GRAMMAR

COURSE CONTENT

- Phonology – phonetics.
- Consistency and inconsistency of utterance and spelling.
- The sounds of the Greek language and phonetic representation based on the International Phonetic Alphabet.
- Phonemes.
- Intonation, three - syllable word rules.
- Morphology.
- Words (nouns and adjectives): gender, number, suffixes.

  Verbs: nature of action, timeline, conjunction, voice, person, gerund.

Syntax

- Structure of verbal phrases: object, complement, adverbial, conjugation, passive word order.

- Transitive, intransitive, impersonal, conductive, deponent, accusative verbs.
- Structure of nominative phrases: case, complement, qualifier.
- Syntactical function of noun clauses, adjectives.
- Articles (definite, indefinite, zero).
- Complementary sentences, adverbial sentences.

Δ01Π03 CHILDREN'S LITERATURE

COURSE CONTENT

- Definition and limits of Children's Literature-Adult Literature.
- Elements of the History and Theory of the Children's Book.
- Forms of Censorship and Resistance. The game of rules and violations.
- Political Censorship and Children's Book.
- Pedagogical Censorship and Political Correctness.
- Self-Criticism and Exceedance.
- The linguistic-logical essay and the irrational tale. -The transformation of formal texts in a children's book.
- Political Allegory, Historicity and Fairy Tale.
- The political myth of the hermit or the adventure of transcription.
- Predicting Nazism and projecting Resistance.- History of adults and children's books.
- Texts for girls of the past and the present.

Sexist and feminist narratives.

- Old Children's books and modern communication adult codes.
- Presentations of student work - Report - Conclusions.

Δ01Π06 THE LANGUAGE LESSON IN THE PRIMARY SCHOOL

COURSE CONTENT

- The role and importance of language. Written and Oral Speech of today.
- Elements of semantics and terminology.
- Language-norm and deviations.
- The language idiom, as an element of culture and as a problem in class.
- The different Grammars, school grammar and the grammar of fantasy and storytelling.
- Language lesson and Ideology- The language issue, texts and narratives.
- The narratives of Demoticism, then and now.
- The Language Game: Concept and applications.
- Wittgenstein's theory as a trigger for linguistic and interdisciplinary teaching and narrative activities.

- The Theory of Literature as a Method of Speech Production: The Reggio Emilio Experiment.
- Linguistic error and correction/pedagogical and language problems.
- Reflection: The language lesson between Imagination and "Meticulousness"?
- Presentations of student works - Report – Conclusions.

Δ01 Π13 CONTEMPORARY GREEK AND EUROPEAN LITERATURE

COURSE CONTENT

- THE TRANSFORMATION OF THE HERO

Archetypal narration and Ancient myths.

The commercialization of Homeric myths.

Feminist and other reviews.

The ancient myth and European poets.

- THE TRANSFORMATIONS OF THE WAR

The literature of guilt or on behalf of the perpetrators.

The Literature of Resistance.

The Literature from the victims' side.

The War in the school culture (National days, reading, celebrations, memory,

Oblivion of the forgery of history).

- THE TRANSFORMATIONS OF ADULTHOOD

Telemachus rhapsody.

The girl's adulthood.

- THE TRANSFORMATIONS OF THE EUROPEAN FAIRYTALES

Starting from the Cretan fairy tale.

The relationship with the traditional European prose.

The relationship with Greek Antiquity.

Textual and ideological Transformations.

Ε01Π07 METHODOLOGY OF TEACHING MATHEMATICS IN PRIMARY SCHOOL

COURSE CONTENT

- Elements of Teaching Theory: Constructivism in relation to learning and teaching of Mathematics, the conceptual space and problems of teaching mathematics, the conceptual image (concept image) of the students for the taught objects, difficulties and obstacles (ontogenetic, epistemological, didactic,…) encountered by students and their role in learning mathematics, students' mistakes and their importance, the semiotic fields of expression and processing of mathematical concepts and the importance of their alternation in learning these concepts. The socio-cultural approach to teaching and learning mathematics, the classroom as a learning community in mathematics, the concept of

the Teaching Contract, the Teaching Transformation in Mathematics (a) the knowledge of the specialists, (b) the students formal knowledge, (c) the knowledge actually received and the transformations from (a) to (b) and from (b) to (c). (The elements of the Didactic Theory are discussed at an introductory level during two three-hour sessions then used and re-examined in conjunction with the other sections of the course material) (i) Discussion on the construction of the concept of numbers. Didactic approaches and teaching methodology regarding: the introduction of the concept of numbers, in the additive structures: introduction of addition and subtraction, addition and subtraction with small numbers, addition and subtraction with larger numbers and its addition and subtraction algorithms, addition and subtraction problem area and their categorization and classification.

- Teaching approaches and teaching methodology regarding multiplicative structures: introduction of multiplication and division, the learning of multiplication table, the algorithms of multiplication and division, problems solved by multiplication or division and their categorization and classification relating to the proportional amounts and inversely proportional amounts.
- Teaching approaches and teaching methodology regarding arithmetic representations and the priority of operations.
- The evolution of students' geometric thinking, the characteristics of teaching geometry and its importance in the development of students' geometric thinking. Didactic approaches regarding some basic sections of the Curriculum Program of Geometry in Primary School (the concept of the angles, vertical and parallel lines, triangles, rectangles, circles, areas). Educational software for Geometry and their didactic utilization. The epistemological difference between empirical and Euclidean Geometry and its significance, the difficulties and obstacles that students face in approaching Euclidean Geometry. The characteristics and limitations of the existing curricula .The role and importance of work in primary school in terms of the students learning approach to Geometry in secondary education.
- The implementation of the History of Mathematics in the teaching of Mathematics.
- Alternative forms of teaching Mathematics: Collaborative teaching, differentiated teaching, exploratory teaching and learning, self-correction, self-learning and self-corrective teaching activities.

E01П08 MODULES OF MATHEMATICS CURRICULUM IN PRIMARY SCHOOL

COURSE CONTENT

- Discussion and exercises on: Euclid division, certain divisibility properties and their proofs (if a divides β and β divides γ then α divides γ, if α divides β, γ then divides and b + c), prime and complex numbers, analysis of a natural product of prime factors.
- Discussion and exercises for: the square root criterion for verifying prime numbers, the Eratosthenes sieve, proof that prime numbers are infinite, The LCM (definition and its applications, finding the LCM using its analysis of a product of prime factors), the GCD definition and applications, finding GCD using product analysis prime factors), practical problems where GCD is used and the LMC , raw material analysis software and search for great firsts and their educational versions as well their applications.
- Discussion and exercises for: the property CM (α, β) = λ.LCM (α, β), the property GCD (α, β) = λ. CD (α, β), the Euclid's algorithm for finding GCD for two or more physicists, the comparison of GCD algorithms.

- Discussion and exercises for: properties LCM (λ.α, λ.β) = λ.LCM (α, β), ΜΚΔ (λ.α, λ.β) = λ.GCD (α, β) and their extension for more than two physical, the properties of LCM (a, b, c) = LCM (α, β), γ), GCD (α, β, γ) = GCD (GCD (α, β), γ) and their extension for more than two physicists, the property of LCD (α, β) = α.β / GCD its applications (in particular the LCD finding algorithm based on this property and the Euclidean algorithm), the comparison of algorithms finding the LCD.
- Discussion and exercises for: software that implements the algorithms discussed in previous courses (spreadsheets, educational software) and their didactic utilization, the properties of equilibrium numbers, the divisibility criteria, the "cross criterion" for its control multiplication and its extension for division.
- Discussion and exercises for: basic aspects of the concept of fraction, the introduction of its concept fraction on the board, the concept of equivalent fractions and the algorithm conversion of two heteronymous fractions into homonyms, its meaning addition and subtraction fractions, addition algorithms and fractionation, addition and subtraction problems.
- Discussion and exercises for: the concept of multiplication and division of fractions, their multiplication and division algorithms, the problems that are solved by a multiplication or a division of fractions.
- Discussion and exercises for: complex problems of multiplication and division of fractions, the meaning of decimal numbers, algorithms of their operations decimal numbers, the criteria for controlling decimal operations number.
- Discussion and exercises for: the concept of percentages, percentage problems, decimal comparison and fractional writing. Summary of the discussion on fractions and the decimals. Brief discussion on real numbers and their classification.
- Discussion and exercises for: the meaning of the corresponding amounts, the properties of the corresponding amounts, the problems of the corresponding amounts and the ways their solutions, how we distinguish the corresponding amounts from quantity relations where the amounts do not they are analogous.
- Discussion and exercises for: the meaning of inversely proportional amounts, the properties of inversely proportional proportionate amounts, the problems of inversely proportional amounts and the ways their solutions. The corresponding and inversely proportional amounts as functions, the algebraic expressions of these functions, the graphs representations of these functions.
- Discussion and exercises for: The multiple corresponding amounts and the ways their solutions. Discussion and exercises for: the types and the relationship of the analogs and the inverse analogs amounts, the types of multiple analog amounts and their endorsement as functions of many variables.

Ε02Π02 (Υ) BASIC CONCEPTS OF PHYSICS

COURSE CONTENT

- Physical sizes & units of measurement, vector & monometer sizes, graphic Life-size representations.
- Engineering: Types of movements (Linear smooth / smoothly changing / changing motion, smooth / variable circular motion), Composition & Analysis of Forces, Laws of Newton, Project-Energy, Principle of Energy Conservation, Rotary motion.

Torque Conservation Principle.

- Electromagnetism: Structure of the Atom, Ways of Electrification, Insulators, Principle Electric Load Conservation, Electric Quantum Quantity, Electric Coulomb Power, Electric Field, Electric Potential and Electric Dynamics lines, Electric Dynamic Energy, DC Circuits, Electrical.

Resistors & Ohm's Law, Resistor Wiring, Electricity & Power

- Thermodynamics: Heat-Temperature, Good & Bad Heat Pipes, Thermal Expansion into Solids / Liquids / Gases, Ways of Heat Propagation, Changes Phases.
- Fluid Mechanics: Pressure Definition, Hydrostatic & Atmospheric Pressure, Buoyancy, Cruising, Transmission of Pressures in Fluids, Bernoulli Principle.
- Wave: Characteristic Sizes of Oscillation, Wave Types, Wave Properties, Sound Waves, Subjective & Objective Characteristics of Sound.
- Optics: Nature of Light, Reflection / Refraction / Diffraction / Fun of Light, Colors & Light Absorption & Emission Mechanisms.

E02П06 SCIENCE EDUCATION IN PRIMARY SCHOOL

COURSE CONTENT

- Delimitation of the scientific field in the Teaching of Natural Sciences.
- Scientific Literacy - Aims & objectives of teaching Physics – Detailed.
- Natural science programs.
- Learning Theories in the field of Science (Cognitive and socio-cultural approaches) - Conceptual changes.
- Ideas of students in Physics.
- Teaching model of Physics.
- Phases of teaching a constructivist model of learning Physics.
- Teaching & Learning through exploration.
- Didactic reconstruction of scientific content.
- Didactic Planning of Science courses – Teaching scenarios – Worksheets.