Přemysl Záškodný

CURRICULAR PROCESS OF PHYSICS

(with survey of principles of theoretical physics)

Curriculum - Content of Education
Variant Form of Curriculum (VFC) - Variant Form of Existence of Education Content
Curricular Process of Physics - Line of Transformations of VFCs
Educational Communication of Physics - Line of Transformations of Knowledge Piece

Survey of Variant Forms of Curriculum

Conceptual curriculum
Communicable Scientific System of Physics

Intended curriculum
Educational System of Physics

Projected curriculum
Instructional Project of Physics

Implemented curriculum-1
Preparedness of Teacher for Instruction

Implemented curriculum-2
Results of Physics Schooling

Attained curriculum
Applicable Results of Physics Schooling

Survey of Principles of Theoretical Physics as Conceptual Curriculum of Statistical and Non-Statistical Physics with Their Classical, Quantum and Relativistic Dimensions

The publication is a result of the grant project of the foundation AVENIRA FOUNDATION FOR RESEARCH OF HUMAN SOCIETY Luzern, Switzerland

APPLICABILITY OF PUBLICATION:

- **Study of theory and practice of curriculum** via curricular process of physics
- **Study of principles of theoretical physics** as of communicable scientific system

CARDINAL PARTS OF PUBLICATION:

Introduction I Delimitation of Curricular Process of Physics
Introduction II Structure of Physics
Part A Statistical Physics
Part B Non-Statistical Physics
Part C Construction and Representation of Curriculum Variant Forms
Part D Practice of Curricular Process
Part E Practice of Theoretical Physics

THEORY AND PRACTICE OF CURRICULUM ARE CONTAINED IN:
– Introduction I
Variant Forms of Curriculum as Components of Curricular Process
Four Structural Elements of Variant Form of Curriculum
– Part C
Methods of Modeling Structural Elements of Curriculum Variant Forms, in General
Methods of Modeling Structure of Physical Knowledge Transfer
Methods of Modeling Structure of Concepts and of Their Cognitive Level
– Part D
Practice of Hierarchical, Analytical-Synthetic and Matrix Modeling
Practice of Triangular and Level Modeling Structure of Concepts
Practice of Modeling „Curriculum research and development“

SURVEY OF PRINCIPLES OF THEORETICAL PHYSICS IS CONTAINED IN:
– Introduction II
Structure of Physics Formed by Statistical and Non-Statistical Physics and Their Classical, Quantum and Relativistic Dimensions (Conceptual Curriculum of Physics)
– Part A
Structure of Statistical Physics and Its Description (Thermodynamic Laws, Fermi-Dirac Distribution, Bose-Einstein Distribution, Maxwell-Boltzmann Distribution)
– Část B
Structure of Non-Statistical Physics and Its Description (Einstein Gravitation Equation, Lagrange Equations, Schrödinger Equation, Maxwell Equations, Operators of Creation and Annihilation)
– Část E
Practice of Theory and Solved Examples of Statistical and Non-Statistical Physics

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