



Syllabus

Term: 2025/26/2 **Subject name:** Motor development **Subject code:** ENAEDZN0501

Unit (Unit code) (TESTNEV)

Lecturer responsible for the course: Dr. WILHELM Márta Marianna

Requirement: Exam

Classes per week : 2/0/0

Classes per term: 26/0/0

Purpose of education:

Objectives: The lecture intends to introduce students to the characteristics of the human development, stages of the extrauterin life. An overview is provided in the development of the brain, body structures and changes of human movement. The course gives an insight into the biological progression and regression of human life and movement.

Learning outcomes:

1. Understanding developmental stages of the human life, especially in the frame of motor functions
2. Understanding the special features of developmental stages in the frame of physical activity, trainability, especially in different school ages and adulthood

Contents:

Week 1 Definition of development, basic principles of development. The basic mechanisms regulating motor activity.

Week 2 Phases of motor development.

Week 3 Sexual differences and sensitive phases in motor development.

Week 4 Development of the musculo-skeletal system and related neural mechanisms in the prenatal and postnatal life.

Week 5 Development of the newborn and infant. Postural reflexes in fetal development and in the early postnatal age.



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Contents:

Week 6 Sensory development and locomotor activity during infancy and childhood. Development of body-balance mechanisms from fetal growth to adult ages.

Week 7 Motor development in adolescence. Hormone-related changes in the musculo-skeletal system.

Week 8 Developmental trends in physical activity.

Week 9 Chemical maturation in metabolic characteristics of the muscular system during motor development. Motor development in relation to mental development.

Week 10 Environmental factors in motor development. Gene expression.

Week 11 Somatotype and nutritional factors in motor development.

Week 12 Motor abilities from the adult ages up to the senescence.

Week 13 Risk factors in motor development.

System of examining and valuation:

Attending lectures is highly recommended.

2 home works (esignements) within the Semester describing motor abilities, developmental state of a given age group

Written exam is based on lectures, accessible electronic sources and lecture materials. Most common questions in the structure of end term examination are: describing notions, relations, recognizing figures, analysis, multiple choice questions.

1 written tests in the Semester

Final score: 1/3 from the written test scores+ home works + 2/3 from the exam score:



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System of examining and valuation:

Written exam in the exam period.

Final marks:

0–49% not satisfactory

50–64% satisfactory

65–74% average

75–84% good

85–100% excellent

Bibliography:

1. Lee, Timothy Donald; Schmidt, Richard Penrose (1999). *Motor control and learning: a behavioral emphasis*. Champaign, IL: Human Kinetics. [ISBN 0-88011-484-3](#).

Espenschade A., Eckert H. (1980): Motor development. – Ch. E. Merrill Publishing Co. 349 p.

Haywood K. (1993): Life span motor development. - Human Kinetics Publisher

Becker, J., Berkley, K., Geary, N., Hampson, E., Herman, J., & Young, E. (2008). Sex differences in the brain: From genes to behavior. (p. 156). New York, NY: Oxford University Press, Inc.

Bibliography:



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