Universitatea Naţională de Ştiinţă şi Tehnologie Politehnica Bucureşti
Facultatea de Electronică, Telecomunicaţii şi
Tehnologia Informaţiei

COURSE DESCRIPTION

1. Program identification information

1.1 Higher education institution	**National University of Science and Technology Politehnica Bucharest**
1.2 Faculty	**Electronics, Telecommunications and Information Technology**
1.3 Department	**Electronic Devices, Circuits and Architectures**
1.4 Domain of studies	Electronic Engineering, Telecommunications and Information Technology
1.5 Cycle of studies	Bachelor/Undergraduate
1.6 Programme of studies	Microelectronics, Optoelectronics and Nanotechnologies

2. Date despre disciplină

2.1 Course name (ro) (en)				Psihologia educaţiei Educational Psychology			
2.2 Course Lecturer				Neagu Simona			
2.3 Instructor for practical activities				Neagu Simona			
2.4 Year of studies	1	2.5 Semester	1	2.6. Evaluation type	E	2.7 Course regime	F
2.8 Course type		C	2.9 Course code	04.C.01.L.025		2.10 Tipul de notare	Nota

3. Total estimated time (hours per semester for academic activities)

3.1 Number of hours per week	4	Out of which: 3.2 course	2	3.3 seminary/laboratory	2
3.4 Total hours in the curricula	56	Out of which: 3.5 course	28	3.6 seminary/laboratory	28
Distribution of time:					hours
Study according to the manual, course support, bibliography and hand notes Supplemental documentation (library, electronic access resources, in the field, etc) Preparation for practical activities, homework, essays, portfolios, etc.					45
Tutoring					10
Examinations					4
Other activities (if any):					10

3.7 Total hours of individual study	69.00
3.8 Total hours per semester	125
3.9 Number of ECTS credit points	5

4. Prerequisites (if applicable) (where applicable)

4.1 Curriculum	Not applicable
4.2 Results of learning	Not applicable

5. Necessary conditions for the optimal development of teaching activities (where applicable)

5.1 Course	Lecture room with video projector

5.2 Seminary/ Laboratory/Project	Seminar room with video projector

6. General objective *(Reffering to the teachers' intentions for students and to what the students will be thought during the course. It offers an idea on the position of course in the scientific domain, as well as the role it has for the study programme. The course topics, the justification of including the course in the currcula of the study programme, etc. will be described in a general manner)*

The Educational Psychology course aims to familiarize students with the main theoretical and applied approaches specific to educational psychology, drawing on results from various fields: general psychology, child psychology, personality and differential psychology, organizational psychology, social psychology, cognitive psychology, etc. It highlights interactions among human developmental characteristics, cognition, instructional methods, measurement and evaluation, and offers practical solutions to facilitate the educational process.

7. Competences *(Proven capacity to use knowledge, aptitudes and personal, social and/or methodological abilities in work or study situations and for personal and proffesional growth. They refflect the empolyers requirements.)*

Specific Competences	• Apply specialized, psycho-pedagogical and methodological knowledge to design and conduct instructional-educational activities in preschool, primary, lower- and upper-secondary education. • Use assessment results for critical self-analysis and to identify optimal improvement solutions at all levels (preschool, primary, lower-secondary, upper-secondary). • Apply teaching strategies specific to each level to differentiate and individualize the approach, adapting methods to the group and to the child/student. • Use scientific methods of the education sciences in empirical research on educational issues in preschool groups and school classes (primary, lower- and upper-secondary). • Use foundational knowledge to analyze and interpret a wide range of specialist concepts applicable at all school levels.
Transversal (General) Competences	• Use effective lifelong learning methods and techniques for continuous professional formation and development.

8. Learning outcomes *(Synthetic descriptions for what a student will be capable of doing or showing at the completion of a course. The learning outcomes reflect the student's acomplishments and to a lesser extent the teachers' intentions. The learning outcomes inform the students of what is expected from them with respect to performance and to obtain the desired grades and ECTS points. They are defined in concise terms, using verbs similar to the examples below and indicate what will be required for evaluation. The learning outcomes will be formulated so that the correlation with the competences defined in section 7 is highlighted.)*

Knowledge	*The result of knowledge aquisition through learning. The knowledge represents the totality of facts, priciples, theories and practices for a given work or study field. They can be theoretical and/or factual.* • List the factors of psychological development. • Identify types of attachment. • Define intellectual, affective and volitional mental processes. • Describe fundamental theories of the structure and development of personality. • Identify temperamental, aptitudinal and character traits and explain relations among them. • Define creativity. • Describe ways to develop creativity. • Identify stages of human psychological development. • Describe the main theories of learning. • Identify types and styles of learning.
Skills	*The capacity to apply the knowledge and use the know-how for completing tasks and solving problems. The skills are described as being cognitive (requiring the use of logical, intuitive and creative thinking) or practical (implying manual dexterity and the use of methods, materials, tools and intrumentation).* • Select and group relevant psychological information in a school/educational context. • Solve educational issues based on psychological information. • Identify pupils' temperamental, aptitudinal and character traits. • Identify practical ways to integrate pupils. • Identify psychological solutions for pupils' learning difficulties. • Communicate effectively in conflict situations. • Formulate and test hypotheses about pupils' motivation in problematic school situations.
Responsability and autonomy	*The student's capacity to autonomously and responsably apply their knowledge and skills.* • Show receptiveness to pupils' specific psychological makeup. • Think autonomously about school-related events. • Be aware of the psychological causality of pupils' behaviors. • Tolerate differences of opinion. • Make use of pupils' potential. • Manage school conflict situations. • Communicate assertively with pupils, colleagues and authorities.

9. Teaching techniques *(Student centric techniques will be considered. The means for students to participate in defining their own study path, the identification of eventual fallbacks and the remedial measures that will be adopted in those cases will be described.)*

Based on students' learning characteristics and needs, teaching will explore expository methods (lecture, presentation) and conversational-interactive methods, using discovery learning through direct and indirect exploration of reality (experiment, demonstration, modeling), as well as action-based methods such as drills, practical activities and problem-solving. Teamwork skills will be practiced for various learning tasks.

10. Contents

COURSE

Chapter	Content	No. hours
1	Educational Psychology – theoretical and applied discipline. 1. Introductory considerations regarding educational psychology as a scientific branch. Object of study. 2. Education as a complex phenomenon. Psychological perspective on education; 3. The place and role of Educational Psychology in the training of future teacher-engineers	2
2	Methods for knowing the pupil's personality. 1. Scientific research methods in psychology 2. Analytical presentation of the main methods for knowing the pupil	2
3	Factors of human psychological development 1. Definition of psychological development. 2. Fundamental factors of psychological development – heredity, environment, education – and complementary ones (life events, psychic emergence, self-determination) 3. Learning characteristics specific to school ages. Cognitive, affective and socio-moral development in childhood, puberty and adolescence 4. Attachment theory.	4
4	Structure and dynamics of the human psychic system. 1. Components of intellect. 2. Regulatory-process components: Will. Affectivity. Motivation	6
5	Structure and dynamics of personality 1. Theories of personality 2. Genetic and educational determinants in the development of the child's personality 3. Temperament — the dynamic-energetic component of personality: definition, classification, temperamental profiles, the place and role of temperament in the personality system 4. Character — the relational-value and self-regulatory component of personality: definition, structure, system of traits and attitudes, classification of attitudes, the place and role of character in the personality system. Character formation. 5. Aptitudes — the instrumental-operational component of personality: definition, general characterization, classification. Intelligence as a general aptitude. Theory of multiple intelligences. Emotional intelligence: identification and regulation 6. Creativity as a dimension of personality. Developing creativity in pupils and teachers	8
6	Learning — a component of the educational process 1. The concept of learning. Study of the cognitive and behavioral mechanisms of learning 2. Theories of learning 3. Internal and external conditions of learning. Neural systems supporting learning. Development of the human brain in ontogenesis. 4. Types of learning — self-regulated learning. Motivation and affect in learning. 5. Psychological issues of assessment and self-assessment in school learning.	4
7	Success and achievement, failure and non-achievement in educational activity 1. Learning styles — effective learning 2. Negative emotional states — anxiety and depression in educational failure	2

	Total:	28

Bibliography:

1. Adams G.R., Berzonsky M.D. (2009), Psihologia adolescenței. Manualul Blackwell, Bucuresti, Editura Polirom
2. Allport, G. (1991), Structura şi dezvoltarea personalităţii, Bucureşti, Editura Didactică şi Pedagogică
3. Comer, R. J., Gould, E., & Furnham, A. (2013). Psychology. Wiley.
4. Cosmovici, A. Iacob, Luminiţa (coord) (1999), Psihologie şcolară, Editura Polirom, Iaşi.
5. Crahay, M. (2009), Psihologia educatiei, Bucuresti, Editura Trei
6. Bonchiş, E. (coord.) (2006), Introducere în psihologia personalităţii, Editura Universităţii din Oradea
7. Crețu, T., Psihologia vârstelor (2009), Iasi, Polirom
8. Duchesne, S. (2012), Educational psychology. Cengage Learning.
9. Ginott, H.G. (2018), Intre parinte si copil, Humanitas
10. Golu, M. (2005), Dinamica personalităţii, Editura Paideia
11. Gordon, T., Burch N. (2012), Profesorul eficient, Editura Trei
12. Hoy, A. W. (2016). Educational psychology (13th ed.). Pearson.
13. Matthews, G., Deary, J.I., Whiteman, C.M. (2005), Psihologia personalităţii, Polirom
14. Mih V. (2010), Psihologie educațională, ASCR
15. Opre, A. (2002), Noi tendinţe în psihologia personalităţii, ASCR
16. Neacşu, I. (2010) Introducere în psihologia educaţiei şi a dezvoltării, Polirom
17. Piaget, J. (2008), Psihologia inteligenţei, Cartier
18. Porumb I., Negreanu C.M., Crăciun A. (2015), Psihologia educaţiei, Editura Universitară
19. Roco, M. (2004), Creativitatea și inteligența emoțională, Polirom
20. Sălăvastru, D. (2004), Psihologia educaţiei, Polirom
21. Slavin, R. E. (2014). Educational psychology: theory and practice. Pearson.
22. Stancu, I. (2005), Mic tratat de consiliere psihologică, SPER
23. Tripon, C. et al. (2023). Conexiuni educaționale..., Editura Universitară
24. Vrabie, D., Ştir. C (2004), Psihologia educaţiei, Dunărea de Jos

SEMINARY

Crt. no.	Content	No. hours
1	Methods for knowing the pupil’s personality 1. Scientific research methods in psychology 2. Analytical presentation of the main methods for knowing the pupil	2
2	Factors of human psychological development — Age as a stage in personality development.	2
3	Structure and dynamics of the Human Psychic System. 1. Components of intellect. 2. Regulatory processes: Will. Affectivity. Motivation	8

4	Structure and dynamics of personality • The importance of knowing personality in the instructional-educational process. • Introversion and extraversion. Applications • Knowing temperament and its relevance in educational activities. Applications • Knowing character traits and their relevance in educational activities. Applications. Case studies • The importance of knowing and developing pupils' aptitudes in the instructional-educational process. Applications • Emotional intelligence: identification and regulation. Applications • Methods for stimulating creativity. Applications Self-image — formation and development. Applications. Case studies	8
5	Learning — a component of the educational process 1. Learning theories 2. Internal and external conditions of learning. 3. Motivation and affect in learning. 4. Psychological issues of assessment and self-assessment in school learning	6
6	Success and achievement, failure and non-achievement in educational activity Learning styles — effective learning	2
	Total:	28

Bibliography:

1. Adams G.R., Berzonsky M.D. (2009), Psihologia adolescenţei...
2. Allport, G. (1991), Structura...
3. Crahay, M. (2009), Psihologia educatiei...
4. Bonchiş, E. (coord.) (2006), Introducere...
5. Creţu, Tinca, Psihologia vârstelor...
6. Ginott, H. G. (2018), Intre parinte si copil...
7. Golu, M. (2005), Dinamica personalităţii...
8. Gordon, T., Burch N. (2012), Profesorul eficient...
9. Matthews, G., Deary, J.I., Whiteman, C.M. (2005)...
10. Opre, A. (2002), Noi tendinţe...
11. Neacşu, I. (2010) Introducere...
12. Piaget, J. (2008), Psihologia inteligenţei...
13. Porumb I., Negreanu C.M., Craciun A. (2015)...
14. Roco, M. (2004), Creativitatea...
15. Sălăvastru, D. (2004), Psihologia educaţiei...
16. Stancu, I. (2005), Mic tratat...
17. Vrabie, D., Ştir. C (2004), Psihologia educaţiei...

11. Evaluation

Activity type	11.1 Evaluation criteria	11.2 Evaluation methods	11.3 Percentage of final grade
11.4 Course	Engagement in lecture with questions, analyses and examples	Formative assessment Ongoing oral checks / Verbal appraisal	20%
	Exam	Written examination	20%

11.5 Seminary/laboratory/project	Involvement in preparing and discussing the addressed problems Case studies, projects, portfolio	Formative assessment Ongoing oral checks / Verbal appraisal	60%
11.6 Passing conditions			
Obtaining 50% of the total score			

12. Corroborate the content of the course with the expectations of representatives of employers and representative professional associations in the field of the program, as well as with the current state of knowledge in the scientific field approached and practices in higher education institutions in the European Higher Education Area (EHEA)

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Date	Course lecturer	Instructor(s) for practical activities
25.09.2025	Neagu Simona	Neagu Simona

Date of department approval	Head of department
26.09.2025	Prof. Dr. Claudius Dan

Date of approval in the Faculty Council	Dean
26.09.2025	Prof. Dr. Mihnea Udrea