

(1.) Course Title: INFPHD160 Theory of informatics curriculum	Credits: 6
Course Classification: Optional	
Theoretical or Practical Nature of the Course, 'training character' ¹³ : 30/70 (credit%)	
Type of Class: lecture and number of hours: 30 in the given semester, <i>(If the course is not (only) taught in Hungarian, then the language: English)</i> Additional (specific) methods and characteristics² used in delivering the knowledge <i>(if any)</i>: -	
Assessment Method (Exam / Midterm Grade / Other³): independent presentation and study on the subject matter Additional (specific) methods⁴ applied in knowledge assessment <i>(if any)</i>: -	
Course Placement in Curriculum (Semester Number): 2	
Prerequisites <i>(if any)</i> : -	
Course Description: A concise yet informative description of the knowledge to be acquired.	
Overview of curriculum theory related to informatics, digital culture, and technology-related domains (e.g., AI, robotics). Types of curricula, major trends in curriculum development, main models of content organization, planning of learning activities, instructional formats and tools, and approaches to curriculum/program implementation and evaluation. Key developmental tendencies of European and Hungarian informatics-related curricula. A systems-oriented model of content regulation in public education. The three-tier curriculum regulation framework in Hungary: the National Core Curriculum, framework curricula, and local school curricula. Structural and content changes across the different versions and revisions of the National Core Curriculum, with a focus on the current and planned curricula. Key competences and cross-curricular competences. Curriculum theories and their applications to informatics curriculum development. Determinants of designing and developing informatics curricula. Analysis of framework curricula, school curricula, educational tools, teaching materials, program packages, and examination requirements. Interrelations between informatics curricula and instructional materials (textbooks, supplementary resources, etc.). Research examples from school-level curriculum development. Comparative analysis of centralised versus local informatics curriculum development. Examination of selected national and international models of central and local curriculum regulation. Case studies and outcome analyses related to school-level informatics curriculum design, development, and content regulation. Key historical milestones in the development of informatics education in Hungary.	
2-5 Most Important Required and Recommended Literature List of required and recommended literature (notes, textbooks) with bibliographic data (author, title, publication details, (possibly pages), ISBN).	
1. European Commission (2022). <i>DigComp 2.2: The Digital Competence Framework for Citizens</i>. Link: https://joint-research-centre.ec.europa.eu/digcomp_en	

2. European Commission (2017). *DigCompEdu: The European Framework for the Digital Competence of Educators*.
Link: https://joint-research-centre.ec.europa.eu/digcompedu_en
3. UNESCO (2019). *AI in Education: Guidance for Policy Makers*.
Link: <https://unesdoc.unesco.org/ark:/48223/pf0000366994>
4. UNESCO (2020). *ICT Competency Framework for Teachers (ICT-CFT), Version 3*.
Link: <https://unesdoc.unesco.org/ark:/48223/pf0000371024>
5. CSTA (2020). *K–12 Computer Science Standards*.
Link: <https://www.csteachers.org/page/standards>

List of Prescribed Professional Competencies and Competency Elements

(knowledge, skills, etc., KKK Section 8) that the course significantly contributes to developing (highlight the most important ones).

a) Knowledge

- Has a research-level understanding of the general and specific characteristics, major directions, and precisely developed boundaries of the subject area within the discipline, as well as the agreed and debated interrelations.
- Creatively comprehends the interrelations, theories, and conceptual frameworks and terminologies of the given field of study.¹
- Possesses research methodology knowledge necessary for independent research in the given discipline/field.

b) Skills

- Capable of creative analysis of the field, synthesizing comprehensive and specific interrelations with a new perspective, and conducting appropriate evaluative and critical activities.
- Able to apply and further develop the specialized learning and problem-solving methods of the field.
- Can creatively elaborate on the novel, previously unknown practical implications of theoretical issues.
- Capable of planning and executing new projects, conducting research in the field, and developing new techniques and approaches.
- Able to identify unforeseen professional problems and uncover the detailed theoretical and practical background necessary for their resolution at a research level.
- Can construct and communicate new relations relevant to the field, as well as comprehensive interrelations significant for personal and communal existence.

c) Attitudes

- Represents and further develops the relations that contribute to the process of human self-creation based on the field's characteristics.
- Possesses an interest and learning ability that enable identifying and solving currently unpredictable research problems in the field.

¹**Section 108**, Article 37 of the National Curriculum Act (Nftv.) 37. lesson: a session (lecture, seminar, exercise, consultation) requiring the personal involvement of the instructor to fulfil the academic requirements specified in the curriculum, the duration of which is at least forty-five minutes and not more than sixty minutes.

² e.g. case studies, role play, thematic presentations, etc.

³ e.g. continuous debriefing, mid-year report

⁴ e.g. request for case studies, thematic papers, essays, business, organisational plans, etc.

- Demonstrates a firm professional commitment, a continuous dedication to exploring new approaches, and an acceptance of the necessity for persistent effort.

d) Autonomy and Responsibility

- Builds and initiates new knowledge areas with creative independence and proposes new practical solutions.
- Participates in formulating theoretical and practical questions with a leadership role and high-level cooperation.
- Engages as an equal discussion partner with professionals in the field.
- Takes responsibility for raising and addressing new ethical questions concerning theoretical and practical aspects of the profession.

Course responsible (name, position, academic degree): **Dr. Andor Abonyi-Tóth, associate professor, PhD.**

Instructor(s) involved in teaching the course (if any) (name, position, academic degree): **Dr. Zsuzsanna Szalayné Tahy, assistant professor PhD.**