

## COURSE OUTLINE

### (1) GENERAL

<b>SCHOOL</b>	SOCIAL SCIENCES		
<b>ACADEMIC UNIT</b>	DEPARTMENT OF CULTURAL TECHNOLOGY AND COMMUNICATION		
<b>LEVEL OF STUDIES</b>	UNDERGRADUATE		
<b>COURSE CODE</b>	PDE 101	<b>SEMESTER</b>	6 <sup>th</sup>
<b>COURSE TITLE</b>	APPLIED TEACHING		
<b>INDEPENDENT TEACHING ACTIVITIES</b> <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		<b>WEEKLY TEACHING HOURS</b>	<b>CREDITS</b>
Lectures		3	5
Laboratory exercises		-	-
Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).		3	5
<b>COURSE TYPE</b> <i>general background, special background, specialised general knowledge, skills development</i>	Elective / Special background		
<b>PREREQUISITE COURSES:</b>	None		
<b>LANGUAGE OF INSTRUCTION and EXAMINATIONS:</b>	Greek		
<b>IS THE COURSE OFFERED TO ERASMUS STUDENTS</b>	No		
<b>COURSE WEBSITE (URL)</b>	<a href="https://eclass.aegean.gr/courses/131450/">https://eclass.aegean.gr/courses/131450/</a>		

### (2) LEARNING OUTCOMES

<b>Learning outcomes</b> <i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i> Consult Appendix A <ul style="list-style-type: none"> <li>• Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</li> <li>• Descriptors for Levels 6, 7 &amp; 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</li> <li>• Guidelines for writing Learning Outcomes</li> </ul>
At the end of this course, students will be able to: <ul style="list-style-type: none"> <li>• Connect theoretical knowledge with practical experience, focusing on current orientations in Computer Science Didactics and Media Pedagogy.</li> <li>• Analyse the concept of digital literacy or media literacy.</li> <li>• Utilize various pedagogical approaches that promote innovation in teaching Computer Science and ICT, as well as foster free thought and expression and the overall democratization of the classroom and school.</li> <li>• Design teaching scenarios for primary and secondary education students, justifying their methodological choices, proposing activities to develop digital skills and computational thinking, and suggesting alternative techniques for evaluating teaching.</li> <li>• Develop skills in observation, description, understanding, interpretation, and critical analysis of teaching practices, real classroom conditions, and prerequisites of educational work in the classroom.</li> <li>• Cultivate a research-oriented, critical, and responsible pedagogical attitude towards digital media, choosing appropriate teaching strategies and tools for teaching Computer Science</li> </ul>

<ul style="list-style-type: none"> <li>and digital technologies.</li> <li>Form professional awareness and identity as reflective teachers.</li> <li>Realize, modify, expand, and systematize their personal pedagogical theory, enabling them to reflect on their pedagogical and didactic practices.</li> <li>Gradually and systematically engage in the essential areas of their daily professional activity: planning, conducting, and evaluating the teaching-learning process.</li> <li>Apply differentiated instruction, adapting their methodologies to the needs and abilities of each student, enhancing personalized learning</li> <li>Utilize technologies to create interactive educational materials, incorporating modern tools and applications into daily teaching practice.</li> </ul>	
<b>General Competences</b> <i>Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?</i>	
<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i>	<i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>.....</i> <i>Others...</i> <i>.....</i>
<ul style="list-style-type: none"> <li>Search for, analysis and synthesis of data and information, with the use of the necessary technology</li> <li>Adapting to new situations</li> <li>Team work</li> <li>Working in an interdisciplinary environment</li> <li>Decision-making</li> <li>Production of new research ideas</li> <li>Project planning and management</li> <li>Respect for difference and multiculturalism</li> <li>Showing social, professional and ethical responsibility and sensitivity to gender issues</li> <li>Criticism and self-criticism</li> <li>Production of free, creative and inductive thinking</li> </ul>	

### (3) SYLLABUS

Within the framework of this course, issues concerning the teaching of Computer Science and Media Pedagogy in both primary and secondary education (teaching objectives, content selection, teaching strategies, learning and evaluation processes) and laboratory teaching (Computer Science lab exercises) are studied.

In particular, this course addresses the following topics: (a) Trending orientations in Computer Science Didactics and Media Pedagogy, (b) Digital literacy or Media literacy, (c) Students' practical-experiential knowledge of digital technology concepts, (d) Teaching approaches in Computer Science and Media Pedagogy, (e) Modern approaches to digital technologies and the use of software, and (f) Development of digital educational material.

Additionally, students engage in a practicum in schools that includes three phases: observation of teaching, creation of teaching scenarios, and classroom teaching. Presentations are mandatory in all three phases of the practicum and include: presentation of teaching observation sheets, presentation of scenarios and peer feedback, and presentation of the documentation of the teaching implementation and reflection on the scenario application in the classroom.

For better course organization, groups of two (2) students are formed, and each group collaborates with the classroom teacher and the supervising professor. The goal is to utilize alternative pedagogical approaches for the design and implementation of a different holistic teaching proposal based on qualities such as creativity, dialectics, imagination, emotion, inspiration, intuition, respect

for diversity, reflection, spirituality, and wisdom, among others.

Lectures:

1. Introductory terms of applied teaching. Modern orientations of Teaching of Informatics and Media Pedagogy with or without the use of computer.
2. Applications of the curriculum and learning contents in the teaching of Informatics and digital technologies.
3. Teaching approaches for the implementation of IT teaching in the classroom. Selection of a specific didactic approach. Organization of the teaching-learning process.
4. [*Attendance of teaching in the collaborating schools*]. Organization of the physical learning environment (space - teaching - communication).
5. [*Attendance of teaching in the collaborating schools*]. Interpersonal relationships and communication in the classroom
6. [*Attendance of teaching in the collaborating schools*]. Prevention and treatment of behavioral problems.
7. [*Attendance of teaching in the collaborating schools*]. Triggering and maintaining the interest of students.
8. [*Attendance of teaching in the collaborating schools*]. Didactic design of teaching. Organization and implementation of differentiated teaching. Purpose - Objectives. Teaching units - Teaching hour. Teaching phases (depending on the method). Timetable.
9. [*Carrying out pilot teaching in the collaborating schools*]. Creating a lesson plan or teaching scenario: Teaching subject. Students' Profile. Short summary. Objectives. Teaching methodology/approach. Prior knowledge / Prerequisite knowledge of students. Teaching process. Teaching methods, teaching mode or teaching style based on the chosen pedagogical approach. Teaching materials. Implementation phases. Evaluation. Observations. Creating Worksheets and Evaluation Sheets.
10. [*Carrying out pilot teaching in the collaborating schools*]. Management of teaching time and working groups.
11. [*Carrying out pilot teaching in the collaborating schools*]. Monitoring - Completion of Observation Sheets. Presentation. Reflection of students. Course Portfolio preparation.
12. [*Carrying out pilot teaching in the collaborating schools*]. Multiculturalism, Inter-scientificity and Interdisciplinarity.
13. [*Carrying out pilot teaching in the collaborating schools*]. The concept of teaching effectiveness. Evaluation of the daily teaching program.

#### (4) TEACHING and LEARNING METHODS - EVALUATION

<b>DELIVERY</b> <i>Face-to-face, Distance learning, etc.</i>	Face-to-face	
<b>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</b> <i>Use of ICT in teaching, laboratory education, communication with students</i>	Using open access software for laboratory exercises.	
<b>TEACHING METHODS</b> <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i>  <i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	<b>Activity</b>	<b>Semester workload</b>
	Lectures	13 *3 hours =39 hours
	Study and analysis of bibliography	13*1 hours = 13 hours
	Preparation of practice assignments	94 hours
	Course total	146 hours
<b>STUDENT PERFORMANCE EVALUATION</b> <i>Description of the evaluation procedure</i>  <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i>  <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	<p>The evaluation of the course is conducted through continuous formative assessment by following these steps carried out by groups of two students:</p> <p><b>Phase A:</b> During this phase, students participate in lecture sessions and engage in activities aimed at reflective processing of theoretical knowledge that guides educational practice. Simultaneously, they observe teaching sessions in primary and secondary schools. They familiarize themselves with the school, the classrooms, the teacher, and the students where they will conduct their teaching interventions. It is important to understand the conditions of the school's computer lab and the available equipment, as well as discuss with the teacher the course content. All these elements will be considered for selecting the topic of the teaching scenario that will be created in Phase B.</p> <p><b>Deliverables for Phase A:</b></p> <ol style="list-style-type: none"> <li>1. Observation implementation form: Completed, signed by the IT teacher of the class and the school principal, and stamped.</li> <li>2. Observation sheet for each teaching hour (at least 3 hours): Includes observations regarding the teaching-learning process, supported by relevant literature.</li> </ol> <p><b>Phase B:</b> This phase includes:</p> <ol style="list-style-type: none"> <li>1. Creation of a teaching scenario (for two teaching hours for a group of two students) on a topic decided by the student group in collaboration with the course instructor and the school's IT teacher. The topic selection will consider the class teacher's schedule, the curriculum for the grade and class where the teachings will take place, and the school's available equipment.</li> <li>2. Presentation of scenarios to the plenary: Discussion and feedback which may lead to improvements and revisions.</li> </ol> <p><b>Deliverables for Phase B:</b> The complete scenario that will be created based on the Teaching Scenario Template that is</p>	

	<p>shared with the students or will be uploaded on the platform <a href="https://photodentro.edu.gr/ls/">https://photodentro.edu.gr/ls/</a>.</p> <p><b>Phase C:</b> Teaching implementation: Each group member teaches one hour while the other observes. Recording reflective comments and observations on observation sheets.</p> <p><b>Deliverables for Phase C:</b></p> <p>1.Observation sheets for each teaching hour, including observations and reflective comments. 2.Teaching implementation forms and other documentation</p> <p>The above process is mandatory for the successful completion of the course. Each phase contributes 20% to the final course grade. For the overall student evaluation, responsibility, interest, and active participation are also considered (20%). Participation in the final written exams is mandatory and accounts for 20% of the grade.</p> <p>Presenting the reports/observation sheets during class time is compulsory. Special emphasis during the student's evaluation is placed on their ability to utilize theoretical knowledge for describing, analyzing, interpreting, and evaluating teaching practice. Based on these three steps, students, working in groups, gradually develop an electronic course portfolio (e-portfolio) that reflects in detail all the theoretical and practical experience gained throughout the semester.</p> <p>Participation in the final written exams is mandatory and corresponds to 20% of the grade. Passing the final exams is a condition for issuing the final grade.</p> <p>The evaluation criteria are made known during the first class and are clearly outlined in the material provided on the course's eClass platform.</p>
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## (5) ATTACHED BIBLIOGRAPHY

### - Suggested bibliography:

- Altrichter, H., Posch, P., & Somekh, B. (2001). *Οι εκπαιδευτικοί ερευνούν το έργο τους: Μια εισαγωγή στις μεθόδους της έρευνας δράσης*. Μτφρ. Μ. Δεληγιάννη. Αθήνα: Μεταίχμιο. (Κωδικός βιβλίου στον Εύδοξο: 24221).
- Γούναρη, Π. & Γρόλλιος Γ. (επιμ.) (2010). *Κριτική Παιδαγωγική: μια συλλογή κειμένων*. Αθήνα: Gutenberg.
- Γρηγοριαδου, Γόγουλου, Γουλή, Γλέζου, Μπούμπουκα, Παπανικολάου, Τσαγκάνου, Κανίδης, Δουκάκης, Φράγκου, Βεργίνης (2009). *Διδακτικές Προσεγγίσεις και Εργαλεία για τη διδασκαλία της Πληροφορικής*. Εκδόσεις: ΕΚΔΟΣΕΙΣ ΝΕΩΝ ΤΕΧΝΟΛΟΓΙΩΝ, ISBN: 978-960-6759-23-9, (Κωδικός βιβλίου στον Εύδοξο: 2606).
- Goethals, M.S., Howard, R.A., & Sanders, M.M. (2013). *Ο αρχάριος εκπαιδευτικός ενώπιον της διδασκαλίας: Μια δοκιμή προσέγγισης στην αναστοχαστική διδακτική πράξη*. Επιμ. Γ. Σπανός, Μτφρ. Α. Αργυροπούλου & Ρ. Ευριπίδου. Αθήνα: Εκδόσεις DaVinci. (Κωδικός βιβλίου στον Εύδοξο: 22767861).
- Κορδάκη, Μ., Μάνεσης, Ν. & Νταραντούμης Θ. (2017). *Μάθε ψηφιακά, Παίζοντας*

συνεργατικά. Εκδ. ΓΡΗΓΟΡΗ, Αθήνα.

- Ματσαγγούρας, Η. (2009). *Σχολική τάξη*. Αθήνα: Εκδόσεις Gutenberg.
- Παντελιάδου, Σ., & Φιλιππάτου, Δ. (Επιμ.) (2013). *Διαφοροποιημένη διδασκαλία. Θεωρητικές προσεγγίσεις και εκπαιδευτικές πρακτικές*. Αθήνα: Πεδίο. (Κωδικός Βιβλίου στον Εύδοξο: 22703657).
- Γεώργιος Στυλιαράς & Βικτωρία Δήμου (2016). *Διδακτική της πληροφορικής. Πληροφορική στη Γενική και Ειδική Αγωγή – Η Συμβολή του Διαδικτύου και του Web 2.0*. [ηλεκτρ. βιβλ.] Αθήνα:Σύνδεσμος Ελληνικών Ακαδημαϊκών Βιβλιοθηκών. Διαθέσιμο στο: <http://hdl.handle.net/11419/722>. ISBN: 978-960-603-088-8, (αρ. Εύδοξος: 320036).
- Τριλιανός, Α. (2013). *Διδακτική Μεθοδολογία*. Αθήνα: Εκδόσεις Μονοπρόσωπη Μπαμπούνης.
- Houssaye, J. (επιμ.) (2000). *Δεκαπέντε παιδαγωγοί. Σταθμοί στην ιστορία της παιδαγωγικής σκέψης*. Μτφρ. Δ. Καρακατσάνη. Αθήνα, Μεταίχμιο.
- Paulo Freire (2006). *Δέκα επιστολές προς εκείνους που τολμούν να διδάσκουν*. Εκδόσεις Επίκεντρο, ISBN: 978-960-6647-91-8, (αρ. Εύδοξος: 14920).
- Φύκαρης, Ι. (2010). *Σύγχρονες διαστάσεις του διδακτικού έργου και ρόλο του εκπαιδευτικού*. Θεσσαλονίκη: Εκδόσεις Αφοί Κυριακίδη.
- Ψυχάρης Σαράντος & Καλοβρέκτης Κωνσταντίνος (2017), *Διδακτική & Σχεδιασμός Εκπαιδευτικών δραστηριοτήτων STEM ΚΑΙ ΤΠΕ*, ISBN: 978-960-418-706-5, Εκδόσεις Τζιόλα.

- *Related academic journals:*

- Journal of teaching and learning
- Journal of Teaching and Learning with Technology
- International Journal of Learning, Teaching and Educational Research
- Educational Research
- Teaching and Learning Inquiry
- Journal of Research in Innovative Teaching & Learning
- International Review of Research in Open and Distributed Learning
- Computers in Human Behavior
- Computers & Education
- International Journal of Computer-Supported Collaborative Learning
- Int. J. of Educational Technology in Higher Education
- International Journal on Interactive Learning Environments
- International Journal of Emerging Technologies in Learning
- Journal of Educational Technology & Society
- Journal of Computer Assisted Learning
- IEEE Transactions on Education
- International Journal of Learning Technology
- Journal of Interactive Learning Research