TED UNIVERSITY

TEDU109 – DIGITAL COMPETENCE

Fall-2025 Syllabus

Course Information				
Course Code	**Course Name**	**Location**	**Time**	**Instructional Modality**
TEDU109	DIGITAL COMPETENCE	G113	Tuesday 14.00 - 16.00	Face-to-Face (Lecture) and Online Lab (Friday 11.00-13.00)

Instructor Information	
Name:	Ayşe Gül Kara Aydemir
Office:	
Phone:	
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Office Hours:	Wednesday 11.00 – 13.00

GENERAL INFORMATION

Course Description
(2+0+2) 3 Credits / 5 ECTS

Prerequisites

None

Course Objectives

The general objective of this course is enabling learners to use digital skills effectively in order to enhance their academic and professional capacities. For this purpose, the course introduces the fundamental concepts of information systems and guides the learner to make sense of the digital ecosystem by exploring the relationships between those components. In addition, the course is designed to extend the reach of the productive capabilities of the learner by presenting the tools and methods for content creation, collaboration, and task management by means of digital platforms. Furthermore, the course is aimed at providing the learners with fundamental programming skills in order to prompt them to contemplate the possible implementations of coding skills in their preferred field of expertise.

This course aims to develop students' digital competence by integrating foundational digital skills, algorithmic thinking, and basic programming with a focus on AI literacy and ethical use of technology. The core project for this term is the design and prototype development of TEDDY, an AI-supported learning assistant envisioned to enhance personalized learning and support lifelong education.

Students will work in groups on different modules of TEDDY — such as AI integration,

UI/UX design, data privacy, ethical safeguards, sustainability strategies, and alumni engagement features — culminating in a comprehensive demo and presentation.

By the end of the course, students will have collaboratively developed a functional prototype of the TEDDY learning assistant, demonstrating not only technical and design skills but also critical thinking, ethical awareness, and policy alignment.

Learning Outcomes

Upon successful completion of the course, students will be able to:

1. *Demonstrate the utilization of algorithmic thinking for problem-solving*
2. *Create digital content practically and effectively*
3. *Use digital tools to enhance personal as well as professional productivity*
4. *Write and understand code in Python programming language addressing problems that do not require complex business logic or data manipulation*
5. *Recognize the fundamental components of information systems and their relationships*
6. *Comply with the principles of information security and digital ethics*
7. *Navigate through digital resources to access valid and useful information*
8. *Understand core concepts of AI, its potential and limitations, and its ethical implications.*
9. *Collaborate effectively in teams to design, develop, and present a technology prototype.*

Course Materials

Textbook(s):

Python for Everyone, Charles Severance

Recommended Readings:

McKinsey & Company. (2020) *Future of Work: Turkey's Talent Transformation in the Digital Era*

World Economic Forum. (2020) *The Future of Jobs Report*

Carretero, S., Vuorikari, R., Punie, Y. (2020) *The Digital Competence Framework for Citizens with Eight Proficiency Levels and Examples of Use*

Supplementary Materials:

None

Student Workload (Total … Hours)

70 Hours

Planned Learning Activities and Teaching Methods

Telling/Explaining

Discussion/Debate

Demonstrating

Problem Solving

Hands-on Activities

Collaborating

Questioning

Reading

Video Presentation

ASSESSMENT METHODS

Exam(s)

Two exams will be administered throughout the course: one midterm exam and one final exam at the end of the semester.

Assignment(s)

Students are expected to attend each week's lab sessions and perform the tasks specified for that day's area of study. Each task will have customized requirements and will be evaluated on the fulfillment of those requirements. The due date for each task will be announced and students are required to submit their assignments following the instructions. Late submissions are not permitted or subject to loss of grade points when permitted.

Assignment topics and deliverables are planned accompany lecture topics to improve overall understanding of the students.

Week	Lecture Topics	Lab Focus	Key Deliverables
2	Introduction to AI in Education, Digital Competence, Team formation	Team formation, Project charter writing, Tool setup	Project charter, team roles
4	User-Centered Design, UI/UX principles	UI wireframes, user personas, design sketches	Initial UI prototypes, design scenarios
6	AI basics, algorithmic thinking, Python essentials	AI module prototyping, flowcharting, simple code tasks	Basic AI interaction prototype, module flowchart
8	Data privacy, ethics, and AI safety	Privacy policy drafting, content filter design	Privacy policy draft, initial safety features

Week	Lecture Topics	Lab Focus	Key Deliverables
10	Sustainability strategies, alumni engagement	Module integration, alumni feature design	Sustainability plan, alumni module concept
12	Educational policy alignment, critical thinking design	Final integration, policy mapping, pilot tests	Complete prototype, policy compliance checklist
14	Final demo and presentations	Project presentations, final reflections	Demo, presentation slides, documentation package

In Class Activities:

In class participation of the students are of utmost importance and will be considered as a complimentary to their assignment, quiz and exam performances.

Project(s) / Report(s):

None

GRADING

The course grade will be based on the following:

Item	Weight
Lab Assignments	40%
Midterm Exam	25%
Final Exam	35%
Total	100%

Grade Evaluation Scale

Below is the grading system used in this course:

Percentage Scores	Letter Grades
90-100	AA
85-89	BA
80-84	BB
75-79	CB
70-74	CC
60-69	DC
50-59	DD
0-49	F
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Make-up

There will be no make-up for laboratory assignments. Make-ups for midterm and final exam will be provided if the student can provide a legal document confirming a significant health issue at the time of the examination or with the approval of the instructor.

COURSE POLICIES

Professionalism

Professionalism includes regular attendance in class, timely completion of assignments, and active participation in all activities and discussions.

Plagiarism / Academic Dishonesty

This course adheres to the academic honesty policy. I expect that all work submitted and presented by you will be your own original work and that the contributions of others will be openly acknowledged. Failure to adhere to this policy will result in disciplinary action. For more information:

a. Plagiarism is a form of dishonesty that occurs when a person passes off someone else's work as his or her own. This can range from failing to cite an author for ideas incorporated into a student's paper to cutting and pasting paragraphs from different websites to handing in a paper downloaded from the internet. All are plagiarism.

b. All parties to plagiarism are considered equally guilty. If you share your coursework with another student and s/he plagiarizes it, you are considered as guilty as the one who has plagiarized your work since you enabled the plagiarism to take place. Under no circumstances should a student make

his/her coursework available to another student unless the instructor gives explicit permission for this to happen. Copying someone's work is an extreme and straightforward act of plagiarism. More commonly, however, students plagiarize without realizing they are doing so. This generally happens when a student fails to acknowledge the source of an idea or phrasing. Avoid plagiarism by citing sources properly! For all rules and requirements of APA citations, please consult the 7th edition of the Publication Manual of the American Psychological Association.

c. Read the academic honesty contract (https://student.tedu.edu.tr/en/student/principles-of-academic-integrity). By signing this contract, you certify that you have read, understood and complied to agree with all rules and regulations of academic honesty.

Cheating

You may neither receive help from nor give help to others during an in-class exam. During exams, you may not leave the room, talk, or use dictionaries, translators, cell phones or programmable calculators. In addition, please keep your eyes on your own work.

Attendance

This course requires your regular participation, attendance, and punctuality. It is expected that you attend the class on a regular basis and be on time. It is your responsibility to keep in touch with me about the emergencies prior to class. The TEDU policy concerning attendance will be followed strictly.

The teaching method for this course is hybrid (Online and Face-to-Face). Attendance to face-to-face lectures is **mandatory.** Attendance will be assessed based on LMS Attendance during class. You are expected to upload your answers to LMS Attendance activity for lecture and lab sessions. ***If you do not attend class for more than four days, you will fail the course.***

Late Assignment Submission Policy

Each assignment is to be turned in on time. Arrangements for accepting late assignments will be made only in unusual circumstances (e.g., major illness, death of loved one), and only if you are able to provide documentation to support your excuse.

Late submissions will not be graded for laboratory works. Laboratory works must be completed in the specific timeline for that assignment. If you do not attend the laboratory hours and complete the tasks, however you cannot get any points from the laboratory.

Extra Credit

Students who consistently attend classes will be eligible for an attendance bonus grade. The highest possible bonus grade is 5 points. For example, if you attend half of the lectures during the semester, you will receive a total of 2.5 extra points.

Class Participation

Class participation is an integral part of this course. Classes may involve watching movies, reading, questioning, discussions/debates, video presentations, field trips, observation, reflection, demonstrating, poster presentations, hands-on work, group work, collaborating, educational games, problem solving, library/web research projects, class presentations, and written assignments.

Class Readings

Please read the assigned articles or chapters prior to class so that you may participate fully in the course discussions.

Student Support and Accommodation

Note any relevant academic and personal support services (for example, campus or college writing centers, counselling services, study centers, etc.)

Announcements

All announcements will be made on the LMS site for this course. It is your responsibility to keep your e-mail address operative all times. Check your e-mails regularly in order to stay informed.

Guidelines for Using AI Tools in Assignments

Students are allowed to use AI tools (such as ChatGPT and AI-supported software) in their assignments, **but this usage must be limited to the knowledge and skills learned in their courses.**

AI should serve as a tool to assist in developing the student's own ideas rather than completing the entire assignment. Students must clearly indicate the content generated by AI in their assignments and integrate their original analysis.

Those who do not adhere to these rules may be subject to academic evaluation and disciplinary actions.

PLANNED COURSE SCHEDULE

Week	Date	Module	Lecture	Lab
1	22.09.2025	INTRO	INTRODUCTION TO THE COURSE: KICK- OFF	No Lab
2	29.09.2025	DIGITAL CORE	FUNDAMENTALS OF THE INFORMATION SYSTEMS	Introduction of TEDDY Assistant Platform & Group Formations
3	06.10.2025		AI TOOLS & TRENDS AND TOPICS IN THE DIGITAL AGE	
4	13.10.2025	HUMAN COMPUTER INTERFACE	USER-CENTERED DESIGN & UI/UX PRINCIPLES	Task 1 Delivery (5 pts)
5	20.10.2025		DIGITAL CONTENT CREATION - I	Presentatios Cont.
6	27.10.2025		DIGITAL CONTENT CREATION - II	Task 2 Delivery (5 pts)
7	03.11.2025	PRIVACY & ETHICS	DATA PRIVACY, ETHICS, and AI SAFETY	Presentations Cont.
8	10.11.2025	SUSTAINABILITY	SUSTAINABILITY AND PROJECT CONTINUITY	Task 3 Delivery (5 pts)
9	17.11.2025		MIDTERM	Presentations Cont.
10	24.11.2025	CRITICAL THINKING DESIGN	EDUCATIONAL POLICY ALIGNMENT & CRITICAL THINKING DESIGN	Task 4 Delivery (5 pts)
11	01.12.2025	PRODUCT DELIVERY & DOCUMENTS	FINAL DEMO, PRESENTATION AND REFLECTIONS	Presentations Cont.
12	08.12.2025	PROGRAMMING JOURNEY	PROGRAMMING ESSENTIALS – I	Task 5 Delivery (5 pts)

13	**15.12.2025**		PROGRAMMING ESSENTIALS – II	**Presentations Cont.**
14	**22.12.2025**		DECISION MAKING: CONDITIONAL FLOW - I	**Task 6 Delivery (15 pts)**
15	**29.12.2025**		DECISION MAKING: CONDITIONAL FLOW I - II	**Presentations Cont.**
16	**TBD**		**FINAL EXAM**	