SUBJECT DATASHEET

DIGITAL TRANSFORMATION PROJECT

BMEGT20ML82

I. SUBJECT DESCRIPTION

1. SUBJECT DATA

Subject name
DIGITAL TRANSFORMATION PROJECT

ID (subject code)	BMEGT20ML82

Type of subject
contact lessons

Course types and lessons

Type	*Lessons*
Lecture	1
Practice	0
Laboratory	0

Type of assessment
exam grade

Number of credits
3

Subject Coordinator

Name	*Position*	*Contact details*
Dr. Nemeslaki András	professor	nemeslaki.andras@gtk.bme.hu

Educational organisational unit for the subject
Department of Management and Business Economics

Subject website
https://edu.gtk.bme.hu

Language of the subject
magyar - HU

Curricular role of the subject, recommended number of terms

Direct prerequisites

Strong	None
Weak	None
Parallel	None
Exclusion	None

Validity of the Subject Description
Approved by the Faculty Board of Faculty of Economic and Social Sciences, Decree No: 580269/9/2025 registration number. Valid from: 26.03.2025.

2. OBJECTIVES AND LEARNING OUTCOMES

Objectives

The aim of this course is to present the basic questions of the digitalizations and the network economics, challenges, opportunities. The students will get aquainted how the classical business processes can be transformed because of the ICT. At first we summarize the macroeconomic effects of the ICT-s, especially focusing on the productivity, economic growth and employment. In connection with this we will see the microeconomical characteristics of the digital or informational products, especially those business models that are important to companies. We will discuss in detail the pay-off of the ICT investments, the economical issues of the widespread platforms (app-s), and many aspects of the data economics. After dealing with the horizontal fields, we will discuss some vertical economic areas, like e-commerce, financial services, industrial development (Industry 4.0), and some typical effects on the public sector. Later we discuss some forward-looking areas of virtual new industrial opportunities, like e-sport or services regarding augmented reality. Beside the thorough discussion of micro- and macroeconomic concepts, we emphasize that the subject is managerial approached and no pre-requsites are needed.

Academic results

Knowledge

1. Know the economical and especially the financial models of the digital and network economics.
2. Know the basics of the business model creation, especially in modern digital ecosystem.
3. Know the analysing methods of the ICT investments and the creation of the related models for decision making.
4. Have an overview of the concept of the economical transformation of e-commerce, industrial development, public sector- and the managerial tasks related.
5. Understand the basics of the managerial and strategic way of thinking related ICT, and how ICT increase competi-tiveness in micro and macro level.

Skills

1. Are able to create and communicate digital business models.
2. Are able to calculate the pay-off of ICT investments, analyse simple ICT investments.
3. Are able to start consulting and creating concepts on the governmental and the organizational level of the analysis of digital transformation.

Attitude

1. Behave innovatively in developing organizations.
2. Are able to facilitate andseek consensus in multidisciplinarystrategic environment (computer scientist,economist, financial expert, marketer, product developer, administration organizer)
3. Accept the dynamics of ICT economy and adapts to its economical effects.
4. Become conscious about valuing and sensing the “weak signs” of robotization, artificial intelligence, algorithmic economy.
5. Are receptive about accepting the state involvement, and able to cooperate on this.

Independence and responsibility

1. Are able to perform anmanagerial decisions on certain areas of digital economy.
2. Able to responsiblytake sides on the social effects of ICT.
3. Are independent, constructive and assertive in the fields of business development.

Teaching methodology

Lectures, individual tasks, groupwork

Materials supporting learning

- Nemeslaki A. (2020): Digitális transzformáció projekt, oktatási segédanyag, BME GTK, Budapest Tárgyfelelős által készített jegyzet és letölthető formában a tanuláshoz felhasználható az előadásokon bemutatott diasorozat és cikkek. A tárgyhoz kapcsolódó jegyzet és a bemutatott diasorozat a tantárgy Moodle oldaláról letölthető.

II. SUBJECT REQUIREMENTS

TESTING AND ASSESSMENT OF LEARNING PERFORMANCE

General Rules

A 2.2. pontban megfogalmazott tanulási eredmények értékelése beadandó projektfeladat értékelése alapján történik.

Performance assessment methods

Projektfeladat csoportos és egyéni elemekkel 50-50%-ban. Ezek pontos követelménye létszám-függő. Az adott félévi követelményeket, a dolgozatok beadási határidejét az oktató az első kontaktórán kihirdeti és a félév elején a tantárgy honlapján közzéteszi.
A projektfeladat sikeres teljesítésének hiányában, a tárgy vizsgával teljesíthető a vizsgaidőszakban.

Percentage of performance assessments, conducted during the study period, within the rating

- **Projektfeladat (félév során végzett munka)**: 100
- **Összesen**: 100

Percentage of exam elements within the rating

- **Vizsga/Projektfeladat**: 100
- **Összesen**: 100

Conditions for obtaining a signature, validity of the signature

Az aláírásnak nincs külön követelménye.

Issuing grades

Excellent	91
Very good	85–90
Good	70–84
Satisfactory	55–69
Pass	40–54
Fail	0-39

Retake and late completion

A TVSZ megfelelő paragrafusa szerint.

Coursework required for the completion of the subject

részvétel a kontakt tanórákon	12
félévközi készülés az órákra	12
projekt feladat elkészítése	42
kijelölt írásos tananyag önálló elsajátítása	24
összesen	90

Approval and validity of subject requirements

Consulted with the Faculty Student Representative Committee, approved by the Vice Dean for Education, valid from: 03.03.2025.

III. COURSE CURRICULUM

THEMATIC UNITS AND FURTHER DETAILS

Topics covered during the term

A 2.2. pontban megfogalmazott tanulási eredmények eléréséhez a tantárgy a következő tematikai blokkokból áll.

1 Bevezetés a digitális gazdaság és információgazdaság fogalomkörébe és jelentőségébe
2 A digitális termékek gazdaságtana
3 Platform gazdaságtan – kétoldalú piacok elmélete
4 Vállalati internet stratégia – e-business és digitális transzformáció
5 Az iparfejlesztés digitális gazdaságtana
6 Digitális iparágak működése

Additional lecturers

Dr. Danyi Pál	egyetemi docens	danyi.pal@gtk.bme.hu
Dr. Nemeslaki András	egyetemi tanár	nemeslaki.andras@gtk.bme.hu
Dr. Kis Gergely	egyetemi adjunktus	kis.gergely@gtk.bme.hu
Sándorfi Gergő Álmos	PhD hallgató	sandorfi.gergo.almos@gtk.bme.hu

Approval and validity of subject requirements