

## Tárgytematika / Course Description

### Business Statistics and Data Mining

KGNM\_MMTA063

**Tárgyfelelős neve /**

**Teacher's name:** dr. Lőre Vendel

**Félév / Semester:** 2020/21/2

**Beszámolási forma /**

**Assesment:** Vizsga

**Tárgy heti óraszám /**

**Teaching hours(week):** 2/2/0

**Tárgy féléves óraszám /**

**Teaching hours(sem.):** 0/0/0

### OKTATÁS CÉLJA / AIM OF THE COURSE

The aim of this course is to introduce students to data analysis and computer visualization techniques in beginner and pre-intermediate level. Students are expected to know basic Business Intelligence (BI), MS Pivot, MS Power Pivot, and some methodologies based on MS Excel Analysis Toolpak (basic regression, correlation, and descriptive statistics).

### TANTÁRGY TARTALMA / DESCRIPTION

Week	Topic
1	01. Pivot basics (grouping, filtering, ordering) focusing on business analysis
2	02. Advanced pivoting (customization, calculations)
3	03. Detailed calculations in pivot. Exercise using a stock market database.
4	04. Pivot visualization (Pivot charts)
5	05. Pivoting connected tables (Pivots without PowerPivot)
6	06. Introduction to Power Pivot
7	07. DAX calculations
8	08. Power Pivoting databases, exercise
9	09. advanced computations with Power Pivot
10	10. Descriptive statistics, confidence interval

11	11. Forecasting from time series, Moving Average (MA)
12	12. Correlation, introduction to regression (basics of forecasting)
13	13. Introduction to Power BI
14	14. Analysis using Power BI

## **SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESSMENT'S METHOD**

Exam registration will be authorized based on active course participation.

The written exam can be completed in the exam period. The exam is an IT based practical task which is based on the topics of course (Pivot, Power Pivot and basic statistics).

Grading scheme:

- 0-59 points: fail (1)
- 60-69 points: pass (2)
- 70-79 points: satisfactory (3)
- 80-89 points: good (4)
- 90-100 points: excellent (5)

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## **KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL**

### **Obligatory material**

Distributed materials:

- Youtube videos of course
- Tests in Moodle e-learning system
- PowerPoint slides
- Exercise databases, files

### **Recommended materials**

- Adam Aspin (2018) Pro Power BI Desktop, Apress
- Alberto Ferrari- Marco Russo (2014) Building Data Models with Power Pivot, Microsoft
- Andy Field- Jeremy Miles- Zoe Field (2012) Discovering statistics using R, SAGE Publications, London
- Bill Jelen- Michael Alexander (2019) Pivot Table Data Crunching, Microsoft
- Brett Powell (2018) MasteringMicrosoft Power BI, Pact Publishing, Birmingham- Mumbai
- Gil Raviv (2019) Collect, Combine, and Transform Data Using Power Query in Excel and Power BI, Pearson Education
- Marco Russo – Alberto Ferrari (2020) The Definitive Guide to DAX (second ed.), Pearson Education
- Pang-Ning Tan - Michael Steinbach - Vipin Kumar (2012) Adatbányászat - Alapvetés, Panem Kiadó, Budapest
- Rob Collie- Avichal Singh (2016) Power Pivot and Power Bi, Holy Macro! Books