Tárgytematika / Course Description
Business Statistics and Data Mining

KGNM_MMTA063

Tárgyfelelős neve / Teacher's name: dr. Vinkóczi Tamás
Félév / Semester: 2023/24/2
Beszámolási forma / Assesment: Vizsga
Tárgy heti óraszáma / Teaching hours(week): 1/2/1
Tárgy féléves óraszáma / 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 techiques 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 Analyis Toolpak (basic regression, correlation, and descriptive statistics).

TANTÁRGY TARTALMA / DESCRIPTION

Week
Topic

01. Pivot basics (grouping, filtering, ordering) focusing on business analysis

02. Advanced pivoting (customization, calculations)

03. Detailed calculations in pivot. Excercise using a stock market database.

04. Pivot visulaization (Pivot charts)

05. Pivoting connected tables (Pivots without PowerPivot)

06. Introduction to Power Pivot

07. DAX calculations

08. Power Pivoting databases, excercise

09. advanced computations with Power Pivot

10. Descriptive statistics, confidence interval

11. Forecasting from time series, Moving Average (MA)

12. Correlation, introduction to regression (basics of forecasting)

13. Introduction to Power BI

14. Analysis using Power BI

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'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)

KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

Obligatory material

Distributed materials:

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

AJÁNLOTT IRODALOM / RECOMMENDED MATERIAL

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