

Rendszerező, azonosító információk

A fejlesztés címe	Business Data Analyses blended learning tananyag fejlesztése
Azonosító	T2B1
A fejlesztésben résztvevők	Racskó Péter, Baksa-Haskó Gabriella
A fejlesztés eredményének elérhetősége	BCE, Tanárképző és Digitális Tanulás Központ honlap, Kutatás lap alatt
Kapcsolattartó a további információkhoz	Dr. Daruka Magdolna magdolna.daruka@uni-corvinus.hu

A fejlesztés rövid bemutatása

Business Data Analysis tárgy megújítása

A fejlesztés az EFOP-3.4.3-16-2016-00006 azonosító számú, „A Budapesti Corvinus Egyetem intézményi fejlesztései a felsőfokú oktatás minőségének és hozzáférhetőségének együttes javítása érdekében” című projekt támogatásával valósult meg.

Az angol nyelvű bachelor képzések első évében kötelező tantárgy 12 előadást és 12 gyakorlatot tartalmaz. Az egész kurzus intenzív blended learning támogatással, Moodle keretrendszerben működik.

A mostnai fejlesztés során a gyakorlatok mellé az elméleti tananyagot is átszerveztük blended learning rendszerűvé. Ennek keretében készült el 16 db oktató videó Racskó Péter előadásában. Ezek a videók egyenként 15-20 percesek. A hallgatók Minden második héten hagyományos keretek között vesznek részt az élő előadásokon, a köztes heteken pedig előre beosztott sorrendben és kiosztásban a videókat kell feldolgozniuk. A videók és az élő előadások fíliái a Moodleben érhetőek el.

Az élő előadásokon az önállóan feldolgozott videóanyagokból egy Kahoot teszt keretében adnak számot a hallgatók. Ez lehetőséget teremt arra is, hogy a félreértéseket az előadáson tisztázzák, illetve hogy átismételjék a videón elhangzott tananyag lényeges pontjait. A Kahoot tesztet hibátlanul kitöltők plusz pontokat szerezhetnek, amelyek a vizsga minimumkövetelményeinek teljesülése után az összpontszámot növelik.

Az előadások időbeosztása:

1st week: Data sources

- SME
- Enterprise
- Financial institution
- Government
- Sports
- Science
- Social networks

2nd week: VIDEO
Introduction

- V1/a: Data source timing (Part I.)
- V1/b: Data source timing (Part II.)

3rd week: Gathering and storing
data

- I/O devices
- Storage (local and cloud)

4th week: VIDEO Enterprise information
systems

- V2: Integrated Information Systems
- V3: Enterprise Information Systems
- V4: Information Systems

5th week: Basic applications –
digitalization

- Enterprise Information Systems
- Integrated information Systems
- ERP
 - HR
 - CRM
 - Finance
 - MM
- Communication (Internet, email, VOIP, IM, Social Networks, Intranet, VPN, Extranet)

6th week: VIDEO CRM, HR,
MM, FI

- V5: CRM
- V6: HR
- V7: Material Management
- V8: Financial Management

7th week: Operational

models

- On premises
- Outsourcing
- X as a service – cloud computing
- Comparison of operational models

8th week: VIDEO Operational models and Business Data Analysis

- V9: Operational models
- V10: Decision Support Systems
- V11: Big Data
- V12: Business Data Analysis
- V13: Future Trends in IT

9th week: Data Security and Privacy

- Vulnerabilities of the information systems
- Privacy concept and compliance

10th week: VIDEO Data Security and Privacy

- V14: Information Security
- V15: Privacy

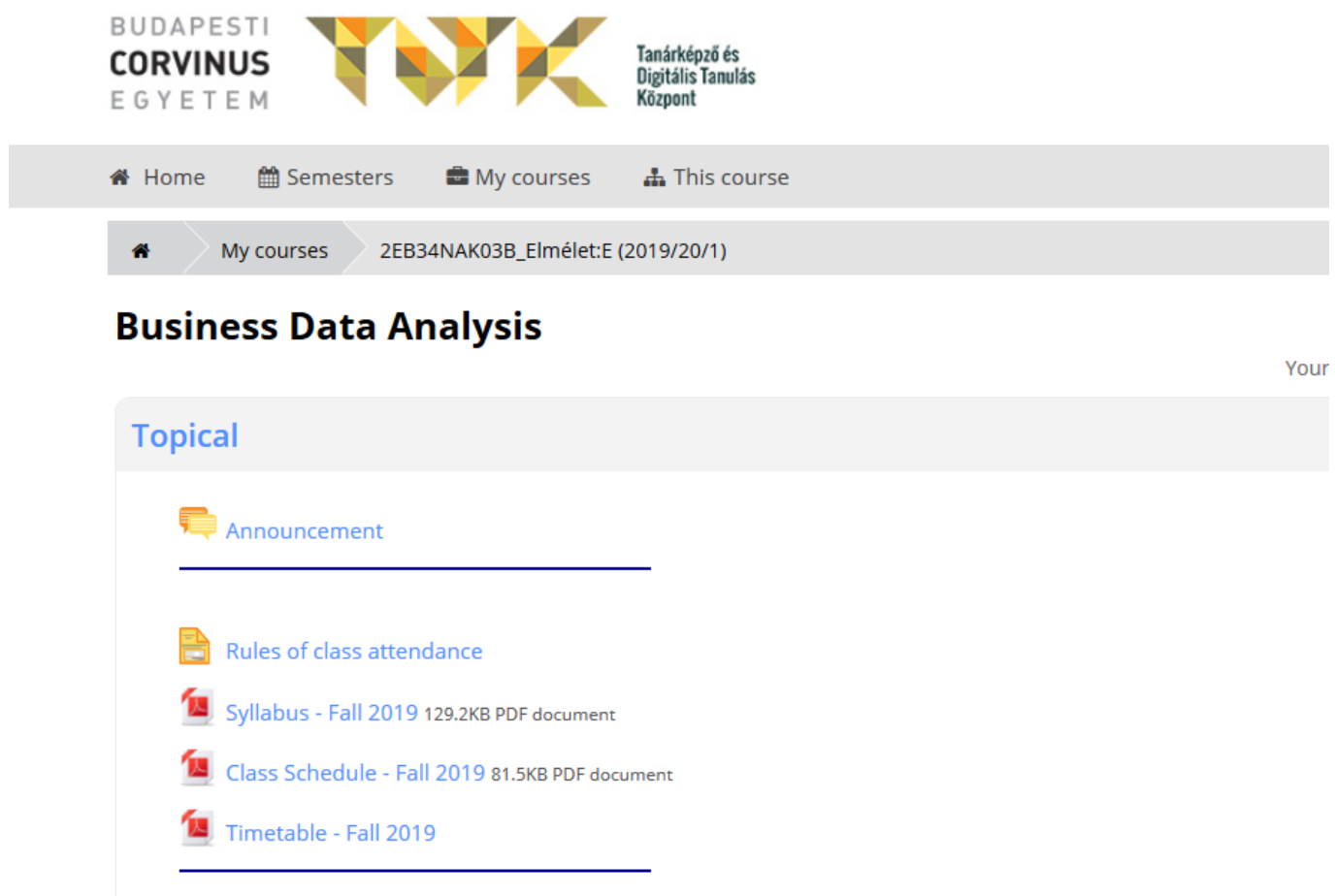
11th week: Business Data Analysis

- Decision Support Systems
- Big Data
 - Structured databases
 - Not fully structured data
 - Handling unstructured data
 - Visualization of the results

• IoT

12th week: Final
exam

<http://moodle.uni-corvinus.hu/course/view.php?id=145829>



The screenshot shows the Moodle course interface for 'Business Data Analysis'. At the top, there are logos for 'BUDAPESTI CORVINUS EGYETEM' and 'Tanárképző és Digitális Tanulás Központ'. Below the logos is a navigation bar with 'Home', 'Semesters', 'My courses', and 'This course'. The current page is 'My courses' for the course '2EB34NAK03B_Elmélet:E (2019/20/1)'. The course title 'Business Data Analysis' is prominently displayed. On the right side, there is a 'Your' label. Below the course title, there is a 'Topical' section containing a list of resources: 'Announcement', 'Rules of class attendance', 'Syllabus - Fall 2019' (129.2KB PDF document), 'Class Schedule - Fall 2019' (81.5KB PDF document), and 'Timetable - Fall 2019'.

Lectures

A fejlesztés az EFOP-3.4.3-16-2016-00006 azonosító számú, „A Budapesti Corvinus Egyetem intézményi fejlesztései a felsőfokú oktatás minőségének és hozzáférhetőségének együttes javítása érdekében” című projekt támogatásával valósult meg.

Lectures


Lecture - resources

- Kahoot for 2nd week videos
- Kahoot for 4th week videos
- Kahoot for 6th week videos
- Kahoot for 8th week videos
- Kahoot for 10th week videos

Theoretical sample quiz

Theoretical assessment

 [KahootBusiness Data Analysis week 06](#) 75.1KB Excel 2007 spreadsheet

 [KahootBusiness Data Analysis week 04](#) 77.8KB Excel 2007 spreadsheet













 [KahootBusiness Data Analysis week 08](#) 159.3KB Excel 2007 spreadsheet

 [KahootBusiness Data Analysis week 10](#) 133.5KB Excel 2007 spreadsheet




9 September -15 September

Excel-1 (*Fundamentals of managing data*)

-  for teachers 01
-  class01 - for teachers 2.1MB Powerpoint 2007 presentation
-  class01
-  Excel01_account
-  Excel01_homework
-  Classwork - 01 Monday 9:50 - 11:20
-  Classwork - 01 Monday 11:40 - 13:10
-  Classwork - 01 Monday 13:40 - 15:10
-  Classwork - 01 Tuesday 8:00 - 9:30
-  Classwork - 01 Tuesday 11:40 - 13:10
-  Classwork - 01 Tuesday 13:40 - 15:10
-  Classwork - 01 Tuesday 15:30 - 17:00

Solutions

Solutions


 [Excel01_account\(solved\)](#)

Other resources

 [Excel is Fun \(MS Excel 2010\) - Textbook](#)













 [Excel Basics \(video to watch\)](#)

 [wifi, vpn, etc.](#)



 [Practical sample test](#)


16 September - 22 September

Excel-2 (Charts, Text, Date and time functions)

-  for teachers 02
-  class02 - for teachers
-  class02 487.4KB PDF document
-  Excel02_charts_functions
-  Excel02_charts_functions_withStackedColumn
-  Excel02_homework
-  Classwork - 02 Monday 9:50 - 11:20
-  Classwork - 02 Monday 11:40 - 13:10
-  Classwork - 02 Monday 13:40 - 15:10
-  Classwork - 02 Tuesday 8:00 - 9:30
-  Classwork - 02 Tuesday 13:40 - 15:10
-  Classwork - 02 Tuesday 15:30 - 17:00












Solutions

-  Cheat sheet - Computer Class Notes - 2 693.9KB PDF document
-  Excel02_charts_functions(solved)

-  Quick test - 01

23 September - 29 September

Excel-3 (Conditional formulas)

-  For teachers - 03
-  class03 - for teachers
-  class03
-  Excel03 functions
-  Excel03 homework
-  Classwork - 03 Monday 9:50 - 11:20
-  Classwork - 03 Monday 11:40 - 13:10
-  Classwork - 03 Monday 13:40 - 15:10
-  Classwork - 03 Tuesday 8:00 - 9:30
-  Classwork - 03 Tuesday 13:40 - 15:10
-  Classwork - 03 Tuesday 15:30 - 17:00

Solutions

-  Excel03 functions (solved)

30 September - 6 October

Excel-4 (Look up data by using functions)

 for teachers - 04

 class04 - for teachers

 class04

 Excel04_lookup

 Excel04_homework

 Classwork - 04 Monday 9:50 - 11:20

 Classwork - 04 Monday 11:40 - 13:10

 Classwork - 04 Monday 13:40 - 15:10

 Classwork - 04 Tuesday 8:00 - 9:30

 Classwork - 04 Tuesday 13:40 - 15:10

 Classwork - 04 Tuesday 15:30 - 17:00

Solutions












 Excel04_lookup(solved)

 Cheat sheet - Computer Class Notes - 4 778.5KB PDF document

 Quick test - 03


7 October - 13 October

Excel-5 (Manage your data)

-  for teachers - 05
-  class05 - for teachers
-  class05
-  Excel05 DataTable
-  Excel05 homework
-  Classwork - 05 Monday 9:50 - 11:20
-  Classwork - 05 Monday 11:40 - 13:10
-  Classwork - 05 Monday 13:40 - 15:10
-  Classwork - 05 Tuesday 8:00 - 9:30
-  Classwork - 05 Tuesday 13:40 - 15:10
-  Classwork - 05 Tuesday 15:30 - 17:00

Solutions

-  Excel05 DataTable(solved)
-  Cheat sheet - Computer Class Notes - 5 633.8KB PDF document

-  Quick test - 04

14 October - 20 October

Excel-6 (Analyze information, Create Pivot table)

 For teachers - 06

 class06 - for teachers

 class06

 Excel06_pivottable

 Excel06_homework

 Classwork - 06 Monday 9:50 - 11:20

 Classwork - 06 Monday 11:40 - 13:10

 Classwork - 06 Monday 13:40 - 15:10

 Classwork - 06 Tuesday 8:00 - 9:30

 Classwork - 06 Tuesday 13:40 - 15:10

 Classwork - 06 Tuesday 15:30 - 17:00

Solutions












 Excel06_pivottable (solved)

 Cheat sheet - Computer Class Notes - 6 812.5KB PDF document



 Quick test - 05

21 October - 27 October

Graphical presentation with PowerPoint









-  For teachers - 7
-  class7 - for teachers
-  class7
-  Africa
-  Fogg
-  Classwork - 7 Monday 9:50 - 11:20
-  Classwork - 7 Monday 11:40 - 13:10
-  Classwork - 7 Monday 13:40 - 15:10
-  Classwork - 7 Tuesday 8:00 - 9:30
-  Classwork - 7 Tuesday 13:40 - 15:10
-  Classwork - 7 Tuesday 15:30 - 17:00

Solutions

-  Fogg (solved)
-  Africa (solved)

-
-  Quick test - 06

Home assignment #1

-  Requirements - Home assignment #1
-  Monday 9.50-11.20 Betsabé Pérez Garrido
-  Monday 9.50-11.20 Dávid Burka
-  Monday 11.40-13.10 Betsabé Pérez Garrido
-  Monday 11.40-13.10 Szabina Fodor
-  Monday 11.40-13.10 Dávid Burka
-  Monday 13.40-15.10 Betsabé Pérez Garrido
-  Monday 13.40-15.10 Szabina Fodor

28 October - 3 November

Autumn holiday

Sample Excel Assessment












-  Sample Excel assessment 450KB PDF document
-  Sample Excel assessment - Excel file 20.8KB Excel 2007 spreadsheet

4 November - 10 November

Project week


11 November - 17 November

Excel-7 (Data visualization features in spreadsheets)

-  For teachers - 08
-  class08 - for teachers
-  class08
-  Excel07 visualization 1
-  Excel07 homework
-  Classwork - 08 Monday 9:50 - 11:20
-  Classwork - 08 Monday 11:40 - 13:10
-  Classwork - 08 Monday 13:40 - 15:10
-  Classwork - 08 Tuesday 8:00 - 9:30
-  Classwork - 08 Tuesday 13:40 - 15:10
-  Classwork - 08 Tuesday 15:30 - 17:00

Solutions


-  Excel07 visualization (solved)
-  Cheat sheet - Computer Class Notes - 8 984.9KB PDF document


 Quick test - 07


18 November - 24 November

Written assessment - Excel


 A-2019

 B-2019

 C-2019 194.8KB Excel 2007 spreadsheet


 D-2019 194.9KB Excel 2007 spreadsheet

 E-2019

 F-2019

 G-2019

 H-2019

 Excel assessment Monday 9:50 - 11:20

 Excel assessment Monday 11:40 - 13:10

 Excel assessment Monday 13:40 - 15:10












 Excel assessment Tuesday 8:00 - 9:30

 Excel assessment Tuesday 13:40 - 15:10

 Excel assessment Tuesday 15:30 - 17:00

25 November - 1 December

Excel-8 (Excel macros)

-  For teachers - 9
-  class9 - for teachers
-  class9
-  Excel8_macro.xlsx
-  Excel8_homework.xlsm 37.5KB Excel 2007 macro-enabled workbook
-  Classwork - 9 Monday 9:50 - 11:20
-  Classwork - 9 Monday 11:40 - 13:10
-  Classwork - 9 Monday 13:40 - 15:10
-  Classwork - 9 Tuesday 8:00 - 9:30
-  Classwork - 9 Tuesday 13:40 - 15:10
-  Classwork - 9 Tuesday 15:30 - 17:00

Solutions

-  Excel8_macro (solved)

Home assignment #2



-  Requirements - Home assignment #2
-  sample excel file 10.1KB Excel 2007 spreadsheet
-  Home Assignment #2 - Deadline: 7th of December, 2019

2 December - 8 December

Excel-9 (Excel macros II)

-  class10
-  class10- for teachers
-  Excel9_Products
-  Excel9_homework.xlsx 62KB Excel 2007 spreadsheet
-  Classwork - 10 Monday 9:50 - 11:20
-  Classwork -10 Monday 11:40 - 13:10
-  Classwork - 10 Monday 13:40 - 15:10
-  Classwork - 10 Tuesday 8:00 - 9:30
-  Classwork -10 Tuesday 13:40 - 15:10
-  Classwork - 10 Tuesday 15:30 - 17:00

Solutions

-  Excel9_Products (solved)
-  Excel9_Products (solved) - Tuesday 8.00 70.3KB Excel 2007 macro-enabled workbook
Commented VBA codes in the solution (Macros are named "Selections" and "Calculate")

-
-  Quick test - 08

9 December - 15 December

Students' presentation

-  Sample Questions for the theoretical exam 13.3KB Word 2007 document

Combined Exam

The structure of the combined exam:

Students have multiple sections in the combined exam.

- first section: theoretical written assessment for 30 points (20 minutes)
- second section: quiz for 20 points (30 minutes)
- third section: excel written assessment for 50 points (90 minutes)

100 points can be earned and the overall grade will be given based on the scores of the three sections.

Please note: the very last grade obtained that will count (even it is worse than the previous one).

Registration:

- in Moodle under "**Combined exam registration**" link until 12th of December (23:55).

 [Combined exam registration](#)


The combined exam will be held on 17th of December (Tuesday) from 10:00 to 14:00 in computer room S220 (Salthouse) and S302 (Salhouse).

16 December - 22 December

Combined Exam

 [Room schedule for Combined Exam - 2019.12.17](#) 69.6KB PDF document

 [Combined exam - Theoretical quiz](#)


 [Combined exam - Practical quiz](#)


 [Combined exam- Excel group #1](#) 43.4KB Excel 2007 spreadsheet


 [Combined exam - Excel group #2](#) 43.5KB Excel 2007 spreadsheet

 [Combined exam - Practical part](#)

 [Combined exam- Excel assessment group #1 \(Word\)](#) 21.3KB Word 2007 document

 [Solution Combined exam- Excel assessment group #1](#) 72.3KB Excel 2007 spreadsheet

 [Combined exam- Excel assessment group #2 \(Word\)](#) 21.3KB Word 2007 document


 [Solution Combined exam- Excel assessment group #2](#) 78.4KB Excel 2007 spreadsheet


 [Combined exam - Practical part](#)

EFOP-3.4.3-16-2016-00006
„A Budapesti Corvinus Egyetem intézményi fejlesztései a felsőfokú oktatás minőségének és hozzáférhetőségének együttes javítása érdekében”


[Home](#) [Semesters](#) [My courses](#) [This course](#)

 [Combined exam - Excel group #2](#) 43.5KB Excel 2007 spreadsheet

 [Combined exam - Practical part](#)

 [Combined exam- Excel assessment group #1 \(Word\)](#) 21.3KB Word 2007 document

 [Solution Combined exam- Excel assessment group #1](#) 72.3KB Excel 2007 spreadsheet

 [Combined exam- Excel assessment group #2 \(Word\)](#) 21.3KB Word 2007 document


 [Solution Combined exam- Excel assessment group #2](#) 78.4KB Excel 2007 spreadsheet

 [Kahoot Video01/1](#)

 [Kahoot Video01/2](#)

 [Kahoot Video02](#)

 [Kahoot Video03](#)

 [Kahoot Video04](#)

 [Kahoot Video05](#)

 [Kahoot Video06](#)

 [Kahoot Video07](#)

 [Kahoot Video08](#)

 [Kahoot Video09](#)

 [Kahoot Video10](#)

 [Kahoot Video11](#)

 [Kahoot Video12](#)

 [Kahoot Video13](#)

 [Kahoot Video14](#)

 [Kahoot Video15](#)

Lectures

9 September - 15 September: Data sources

- SME
- Enterprise
- Financial institution
- Government
- Sports
- Science
- Social networks

Resources

[Lecture notes #1](#)

16 September - 22 September: VIDEO - Introduction

Resources

A large enterprise :
has at least 5000 employees and/or
has an annual turnover greater than
1.5 billion euros and/or
has a balance sheet total of more
than 2 billion euros.



Data types

Numbers	1234.5
Text	John Smith
Date and time	July 23, 2017
Logical value	True/False
Images	
Video	
Audio	



23 September - 29 September: Gathering and storing data

- I/O devices
- Storage (local and cloud)

Resources

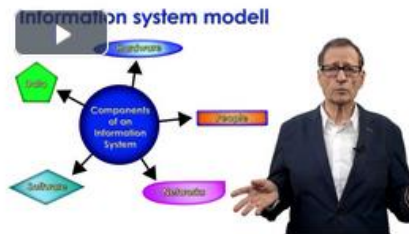
[Lecture notes #2](#)

Resources

[Lecture notes #2](#)

30 September - 6 October: VIDEO - Enterprise information systems Integrated Information Systems

Resources



7 October - 13 October: Basic applications – Digitalization

- o Enterprise Information Systems
- o Integrated Information Systems
- o ERP
 - HR
 - CRM
 - Finance
 - MM
- o • Communication (Internet, email, VOIP, IM, Social Networks, Intranet, VPN, Extranet)

Resources

[Lecture notes #3](#)

14 October - 20 October: VIDEO - CRM, HR, MM, FI

Resources

The CRM module (SAP)
Customer Interactions in marketing:



The diagram shows a central blue circle labeled 'eMarketing' surrounded by eight purple ovals: Social media, Online campaigns, Webinars, Video analytics, Content marketing, Email newsletters, Blogs, and Direct mail. A man in a suit is speaking in the background.

HUMAN RESOURCE MANAGEMENT MODULE
Human Resources (HR) department responsibilities:

- Recruiting and hiring new employees
- Communicating information regarding new positions and hires
- Ensuring proper education, training, and certification for employees
- Handling issues related to employee conduct
- Making sure employees understand job responsibilities
- Using effective process to review employee performance and determine salary increases and bonuses
- Managing salary and benefits for each employee
- Communicating changes in salaries, benefits, or policies to employees
- Supporting management plans for changes in the organization

A man in a suit is speaking in the background.



A video thumbnail showing a man in a suit standing in a large lecture hall filled with students. A play button icon is overlaid on the top left.

EFOP-3.4.3-16-2016-00006
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FINANCIAL INFORMATION MODULE
ACCOUNT ANALYSIS AND RECONCILIATION
 Opening balance
 Totals of transactions



21 October - 27 October: Operational models

- On premises
- Outsourcing
- X as a service – cloud computing
- Comparison of operational models

Resources

[Lecture notes #4](#)

11 November - 17 November: VIDEO - Operational models, Business Data Analysis

Resources

Operational models
Benefits of outsourcing
 Cost savings
 Increased efficiency
 Focus on core areas
 Save on infrastructure and technology
 Access to skilled resources
 Time zone advantage
 Faster and better services



Decision Support Systems



EFOP-3.4.3-16-2016-00006

„A Budapesti Corvinus Egyetem intézményi fejlesztései a felsőfokú oktatás minőségének és hozzáférhetőségének együttes javítása érdekében”

Big Data Velocity

...of an unprecedented speed and must be dealt with in a timely manner. RFID tags, sensors and smart metering are driving the need to deal with torrents of data in near-real time.

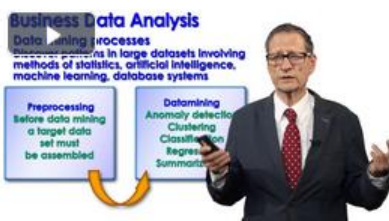


Business Data Analysis

Data Mining processes
 ...in large datasets involving methods of statistics, artificial intelligence, machine learning, database systems

Preprocessing
 Before data mining a target data set must be assembled

Data Mining
 Anomaly detection
 Clustering
 Classification
 Regression
 Summarization



Future Trends in Information and Communication Technology

The interconnection between the new devices are creating new types of smart applications and services



18 November - 24 November: Data Security and Privacy

- Vulnerabilities of the information systems
- Privacy concept and compliance

Resources

[Lecture notes #5](#)

EFOP-3.4.3-16-2016-00006
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EGYETEM

Központ

Home Semesters My courses This course

Blocks Full screen

Resources

Information security
 security threats - examples

- Malware** - is code that runs against your will
- Macroviruses** - viruses e.g. in Office files attached to emails
- Trojan horses** - hidden functions like spying, key logging, downloading other malicious programs
- Spam** - mass of unwanted mails
- Ransomware** - blocks your computer or encrypts your files until you pay ransom
- Phishing** - legitimate-looking mail for gathering personal and financial information



Privacy
 The law has several forms of rules on privacy scenarios.

- Sector rules:** Health Insurance Portability and Accountability Act (HIPAA), Gramm-Leach-Bliley Act for financial information.
- Federal rules** e.g. For the collection of child data on-line: Children's On-line Privacy Protection Act.
- State rules** e.g. California Online Privacy Act.
- Cross-border regulations**
- Safe Harbor - Privacy Shield**



2 December - 8 December: Business Data Analysis

- Decision Support Systems
- Big Data
 - Structured Databases
 - Not fully structured data
 - Handling unstructured data
 - Visualization of the results
- IoT

Resources

[Lecture notes #6](#)

9 December - 15 December: Theoretical written assessment

Other resources

[Fundamentals of Information Systems](#)

Last modified: Wednesday, 28 August 2019, 4:44 PM

EFOP-3.4.3-16-2016-00006

„A Budapesti Corvinus Egyetem intézményi fejlesztései a felsőfokú oktatás minőségének és hozzáférhetőségének együttes javítása érdekében”