

# **Data visualization in Digital Humanities using Power BI**

Ben-Gurion Research Institute for the Study of Israel & Zionism

Course number:

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Module's Description: In the growing Digital Humanities field, where the amount and type of data is overwhelming, being able to take large sets of data taken from artifacts such as texts, maps, demographic data etc, and visualizing it to find patterns and important insights is a must-have skill. In this course the students will learn how to turn large amount of data into meaningful and insightful visualized report using Microsoft Power BI software.

Aims of the module: This course will provide students the skills to create useful and compelling data visualizations that will improve research analysis and the ability to find pattern and relationships in the data.

Objectives of the module: To introduce the student with Digital Humanities and its importance and the use of Microsoft Power BI business intelligence tool to enable to visualize research data that will tell compelling data story that is grounded on facts.

To be qualified for the exams: DA-100 Analyzing Data with Microsoft Power BI and PL-300 Microsoft Power BI Data Analyst.

Learning outcomes of the module: On successful completion of the module, the student should be able to:

- Understand Digital Humanities and its importance
- Understand data and distinguish between data types (structured, un-structured and semi-structured)
- Be able to identify different data sources
- Being capable of downloading data from various sources
- Get familiar with different digital humanities tools and research methods
- Work productively with the Power BI
- Import and connect to simple data sources, including CSV files and Excel workbooks
- Create rich, interactive reports to discover data related patterns and support analysis
- Effectively share, collaborate on, and distribute Power BI content

Attendance regulation: obligatory.

Teaching arrangement and method of instruction: The course will be conducted through formal lectures followed by practical workshop where the students will build a real report based on their researched

data.

Assessment:

· Participation	10%
· Course assignments	10%
· Final project	80%
	100%

Module Content, schedule and outlines

**Day 1&2 (Lecture and lab exercise) 2 and 3 April:**

- Introduction to Digital Humanities and its importance
- Digital Humanities as a global community and movement
- Challenges in ‘digital knowledge’: implicit vs. explicit
- Introduction to text analysis (difficulties, solutions, Hebrew tools)
- Digitization: from scan to text
- Data types: structured, un-structured and semi-structured
- Annotation
- Maps and the spatial turn in the humanities
- Linking entities and authorities: how to establish context, create and enrich communities’ resources

Tools: Transkribus, Voyant, OpenRefine, Recogito, Dicta tools

**Day 3&4 (Lecture and lab exercise) 4 April & April 23rd:**

- Introduction to Power BI
- Working with Power BI Service
- Working with Datasets
  - “Getting Data”
  - Connecting to Data
  - Transforming and sanitizing data
  - Managing relationships
  - Working with Excel Workbooks
- Working with reports and visualizations
  - Introducing Reports
  - Developing Reports
  - Interacting with Reports
  - Designing Advanced Reports
  - Recommended Practices
- Collaborate and share Power BI content and advance Power BI capabilities
  - Power BI Workspace
  - Power BI Apps
  - Power BI mobile apps
  - Power BI and Power Point integration

**Guided workshop (lab exercise) - 26 academic hours:**

- Building compelling reports based on student’s research data
- Documentation, corpus and data criticism, open data

Materials will be taken mainly from the Ben-Gurion Archive.

Literature:

- Schöch, Christof. "Big? Smart? Clean? Messy? Data in the Humanities." Journal of the Digital Humanities 2, no. 3 (2013): 2–13. Link: <http://journalofdigitalhumanities.org/2-3/big-smart-clean-messy-data-in-the-humanities/>.
- Jaenicke, S. et al, "On Close and Distant Reading in Digital Humanities: A Survey and Future Challenges. A State-of-the-Art (STAR) Report." Conference: EuroVis 2015: The EG/VGTC Conference on Visualization. Link: [https://www.researchgate.net/publication/282156818\\_On\\_Close\\_and\\_Distant\\_Reading\\_in\\_Digital\\_Humanities\\_A\\_Survey\\_and\\_Future\\_Challenges\\_A\\_State-of-the-Art\\_STAR\\_Report](https://www.researchgate.net/publication/282156818_On_Close_and_Distant_Reading_in_Digital_Humanities_A_Survey_and_Future_Challenges_A_State-of-the-Art_STAR_Report)

**\*Participants must bring a laptop to the meetings**