

# STATISTICS, DEMOGRAPHICS AND IT METHODS

## 1. MODULE SUMMARY

### Aims and Summary

To make students familiar with different types of data, statistical measures and methods of statistical and demographic analysis. The course will also provide students with the practical ability to compute numeric characteristics and carry out graphical illustration using Microsoft Office tools, as well as, compose good style text and presentations.

### Module Size and credits

<b>CATS points</b>	20
<b>ECTS credits</b>	10
<b>Total student study hours</b>	200
<b>Number of weeks</b>	12
<b>School responsible</b>	Łazarski University, Faculty of Economics and Management
<b>Academic Year</b>	2021-2022

### Entry Requirements (pre-requisites and co-requisites)

N/A

### Excluded Combinations

None

### Composition of module mark (including weighting of components)

Coursework 60%, composed of midterm exam 30%, demographic or statistical project 30%;  
Final examination 40%

### Pass requirements

To pass the course a student must score at least 40% of the overall weighted average and not less than 35% for each assessment component (i.e. final exam and coursework). Re-assessment: coursework component(s) and/or examination as appropriate.

### Special Features

None

### Course stages for which this module is mandatory

BA Year 1 International Relations (level 4)

### Course stages for which this module is a core option

None

## 2. TEACHING, LEARNING AND ASSESSMENT

### Intended Module Learning Outcomes

By the end of the course students should be able to:

1. Collect, analyse, and interpret statistical data.
2. Apply statistical methods to simple real situations.
3. Understand the essence of demographic processes.
4. Use software (such as Excel) in statistical analysis and compose good style text, tables and graphics.

### Indicative Content

- Introduction to statistics. Data acquisition and management (data sets, data sources, experimental and observational studies, acquisition of data: interview, self-enumeration, questionnaires, errors in data);
- Data patterns (simple displays of quantitative data, frequency distributions, displays of qualitative data, displays of bi-and multivariate data)
- Summary measures for data (descriptive statistics: measures of position, variability and skewness)
- Regression (predicting Y from X, interpreting the regression coefficient, measuring how well a regression line fits the data)
- Analysis of Dynamics, Indexes
- Introduction to Demography; Data and methods of demographic analysis. Cross-section and cohort analysis; Demographic processes: fertility, mortality, migration. Demographic theories and population processes: in World and in Poland; Demographic change. Role of Demography in Social Policy.
- Microsoft Word: Creating and formatting a document from scratch; font, paragraph and section levels of formatting; styles, referencing tools and review tools; graphs, equations, tables and other data visualization tools
- Microsoft PowerPoint: Creating a presentation from scratch; working with tables and charts in power point; animation and transition tools;
- Microsoft Excel – Entering and editing data; smart tables; importing data; cell referencing and basic functions; conditional formatting, charts and other visualization tools in Excel; pivot tables and pivot charts.

### Teaching and Learning

This module will be taught by means of lectures, seminars, workshops, and self-directed study.

Formative Assessment: Comments will be given on assessments, and tutorial guidance will be provided for coursework and exam.

Student activity and time spent on each activity comprises:

<b>Guided</b>	0 hours	(0%)
<b>Lecture</b>	45 hours	(22%)
<b>Self guided</b>	110 hours	(55%)
<b>Seminar</b>	15 hours	(8%)
<b>Workshop</b>	30 hours	(15%)
<b>Total</b>	200 hours	

### Method of Assessment (normally assessed as follows)

The intended learning outcomes will be assessed as follows:

Midterm exam (30% – 6 Credits): 90 minutes; contributes to learning outcomes 1-3

Demographic or statistical project (30% – 6 Credits): 1000 words paper; contributes to learning outcomes 1-4

Final exam (40% – 8 Credits): 120 minutes; contributes to learning outcomes 1-3

### Re-sit

Students failing any component of assessment, at the first attempt, are entitled to one re-sit attempt.

This will be by new examination and/or new coursework scheduled for the next assessment opportunity.

For coursework, if more than one element existed in the first attempt, this may be combined into one assessment for re-sit.

**Date of last amendment**

15-06-2021

**3. MODULE RESOURCES**

**Essential Reading**

- Alho, J., Spencer, B., 2005. *Statistical Demography and Forecasting*. New York: Springer.  
Preston, S., Heuveline, P., Guillot, M., 2000. *Demography: Measuring and Modelling Population Processes*. Malden, MA: Blackwell Publishing.  
Walkenbach, J., 2016. *Excel 2016 Bible*. Hoboken: John Wiley & Sons.

**Recommended Reading**

- Foster, L., Diamond, I., Jefferies, J., 2014. *Beginning Statistics. An Introduction for Social Scientists*. 2<sup>nd</sup> ed. Los Angeles: SAGE.  
Murdock, S.H., Swanson, D., 2008. *Applied Demography in the 21st Century*. New York: Springer.  
Ross, S., 2005. *Introductory Statistic*. Burlington: Elsevier Science.  
Walkenbach, J., Tyson, H., Groh, M.R., Wempen, F., Bucki, L.A., 2010. *Office 2010-Bible*. Hoboken Wiley-Blackwell.  
Neter, J., Wasserman, W., Whitmore, G.A., 1993. *Applied Statistics*. 4<sup>th</sup> ed. Boston: Allyn and Bacon.

**Required Equipment**

None

**4. MODULE ORGANISATION**

**Module leader**

**Name** Dr Katarzyna Gmaj

**E-mail** [k.gmaj@lazarski.edu.pl](mailto:k.gmaj@lazarski.edu.pl)

**Length and month of examination**

90 minutes, November, Midterm exam  
120 minutes, January, Final exam (Part 1 - 60 minutes; Part 2 – 60 minutes)

**Expected teaching timetable slots**

Note that some tutorials/seminars may be provided at times other than those shown below. Timetable information should be verified with the School responsible for the module  
No timetable information available

**Subject Quality and Approval information**

**Board of Study** Faculty Collaborative Provision Committee

**Subject Assessment Board** Faculty Council, Faculty of Economics and Management

**Shortened title**

**Date of approval by FCPC** 15 February 2017