

## COURSE DESCRIPTION CARD

NOTE: If the course includes lectures and classes, the Course Description Card applies to both types of instruction.

**1. Course title:**  
**Business Forecasting**

**2. Course code:**  
Number of ECTS credits: 5  
Course completion mode: E  
Course commenced / Year 2019-2020

**3. Major:** International Business

**4. Department of major coordinator:** Department of Consumption Research

**5. Name of course instructor:**  
Lecture Prof. Tomasz Żądło, Ph.D.; Prof. Wojciech Gamrot, Eng.D.  
Classes Prof. Tomasz Żądło, Ph.D.; Prof. Wojciech Gamrot, Eng.D.  
**Examiner** Prof. Tomasz Żądło, Ph.D.; Prof. Wojciech Gamrot, Eng.D.

**6. Department of course instructor:** Department of Statistics, Econometrics and Mathematics

**7. Number of contact hours with students:**

Type of instruction	Full-time study	Part-time study
lectures	28	
classes	28	
foreign language classes		
lab classes		
seminars		
e-learning		
other		
<b>Total hours</b>	56	
examination (hours)	3	

**8. Course timeframe - no. of semesters:** 1

Course commencement / Year 1

Course commencement / Semester 2

**9. Level of tertiary education:** Master

**10. Course status**  
 Compulsory for the major X

**11. Course prerequisites**  
Compulsory: statistics  
Recommended:

**12. Course objectives:**  
Introduction to forecasting and modeling time series used in business practice.

**13. Teaching and learning methods:**

**A. Direct student-instructor contact:**

No.	Teaching methods	Description	Number of hours	
			Full-time study	Part-time study
1.	practice exercises	solving exercises with appropriate software	28	
2.	formal teaching	formal lecture	28	
3.				
...				
Total			AS: 56	AN:0

**B. Self-study:**

No.	Learning methods	Description	Number of hours	
			Full-time study	Part-time study
1.	lecture notes studies	research and reading	20	
2.	individual literature studies	research and reading	20	
3.	individual work	using appropriate software	15	
1.	team work	using appropriate software	14	
Total			BS: 69	BN: 0

Total AS+BS = 56+69=125

Total AN+BN = 0

Examination (E) = 3

Examination (E) = 0

Total AS+BS+E= 128

Total AN+BN+E = 0

**14. Key words:** prediction accuracy measures, econometric model, forecasting

**15. Course content:**

1. Aims and basic concepts of econometrics
2. Econometric model – idea and model building
3. Basic concepts of prediction theory
4. Prediction based on econometric models
5. Prediction based on trend models
6. Exponential smoothing

**16. Course learning outcomes as related to the learning outcomes of the major and methods for assessing student attainment**

Intended learning outcomes of the major / Symbols	Intended learning outcomes of the course	Methods for assessing student learning outcomes	Documentation
<u>Knowledge</u>			
IB2_K04# IB2_K05#	Student has knowledge necessary to prepare business forecasting analysis with the use of appropriate tools and to assess and interpret the results of analyses.	tests, project	tests scripts, project
<u>Skills</u>			
IB2_S02# IB2_S04#	Student is able to use the data, tools and knowledge gathered to prepare and comment on business forecasting analysis in a chosen area.	project	project
<u>Social competences</u>			
IB2_C01# IB2_C02#	Student is able to assess his/her knowledge and professional skills in area of modelling and forecasting time series. Student is willing to asses own level of knowledge and capabilities and search for external experts assistance in business forecasting.	tests, project  tests, project	tests scripts, project  tests scripts, project

**17. Method for determining the final course grade:**

No.	Methods for awarding credits and course completion requirements	Description	Percentage of the final course grade*
1.	Exam	Two tests - solving exercises using appropriate software	80
2.	Class activities assessment	Individual and group work	20

\* If students are required to obtain both a class grade and an exam grade, the class grade constitutes at least 30% of the final course grade.

**18. Reading list****Mandatory readings:**

1. Jeffrey M. Wooldridge: Introductory Econometrics. A Modern Approach. Australia : South-Western Cengage Learning, 2009.
2. Michael P. Murray: Econometrics: A modern introduction. Pearson Education, Boston, 2006.
3. Mikosch, T., Kreiß, Davis, R.A. Andersen T. G: Handbook of financial time series. Springer, 2009. (<https://link.springer.com/book/10.1007/978-3-540-71297-8>).

**Suggested readings:**

1. Baltagi, B. H: Solutions Manual for Econometrics. Springer, 1998. (<https://link.springer.com/book/10.1007/978-3-662-09945-2>).
2. Brockwell P.J., Davis R.A.: Introduction to Time Series and Forecasting. Springer Verlag; New York, 1996.

**19. Language of instruction: English****20. Course instructors' recommendations:**

Lectures in computer laboratories (MsOffice, SPSS)

Classes in computer laboratories (MsOffice, SPSS)