Subject programme

1. Subject name / subject module: **Econometrics**
2. The language of instruction: **English**
3. The location of the subject in study plans:
   - Area or areas of study: **International Business**
   - Cycle of study: **first**
   - Field or fields (implementation of effects standard): **Economics**
4. Supervision of subject implementation:
   - The Institute / Another unit: **Institute of Economics and Management**
   - The person responsible for the subject: **Marcin Fałdziński, PhD**
   - People cooperating in the development of the description of the subject:
5. The number of hours and forms[1] of teaching for individual study system and the evaluation method

Form / Study system	Number of hours with the direct participation of a teacher												Number of hours with the indirect participation of a teacher						Total
	lecture	PWS[2]	ECTS[3]	Laboratory	PWS	ECTS	project	PWS	ECTS	seminar	PWS	ECTS	Remoted classes	PWS	ECTS		PWS	ECTS	ECTS
Full-time	16	34	2,0	24	26	2,0													**4,0**
Evening																			
Extramural																			
Remote																			
Evaluation method	Exam			Graded credit															

6. Implementation: the recommended duration (semesters), recommended prerequisites, the relation between forms of classes [4]: one semester
7. Specific learning outcomes - knowledge, skills and social competence [5]

Specific learning outcomes for the subject		Form[6]	Teaching method[7]	Methods for testing (checking, evaluation) learning outcomes [8]
Outcome symbol[9]	Outcome description[10]			
Knowledge[11]				
K_W05	Has a knowledge of the human being, especially as the entity operating in economic structures - at the individual, group and institutional level	Lecture	Explaining methods: informative lecture	Project, written work, tests
Skills[12]				
K_U02	Is able to properly identify, describe and analyse causes of economic and financial process using econometric tools and methods	Laboratory	Collaborating methods: practical exercise methods - project	Project, written work, tests
K_U03	Is able to predict the effects of certain economic processes and phenomena using econometric models estimated by ordinary least squares method	Laboratory	Collaborating methods: practical exercise methods - project	Project, written work, tests
K_U05				
Social competence[13]				
K_K01	Is ready to use information for solving specific economic problems and communicate with application of information technology	Lecture, laboratory	Explaining methods: informative lecture Collaborating methods: practical exercise methods - project	**P**roject**,** written work, tests
K_K02	Is ready to acknowledge the importance of knowledge in solving cognitive and practical problems as well as to consult the experts in case of difficulities in solving the issue	Lecture, laboratory	Explaining methods: informative lecture Collaborating methods: practical exercise methods - project	Project, written work, tests
K_K03	Is ready to resolve dilemmas associated with the specifics of a profession	Lecture, laboratory	Explaining methods: informative lecture Collaborating methods: practical exercise methods - project	Project, written work, tests

8. Assessment rules / criteria for each form of education and individual grades [14]

Activity	Grade	Calculations	To the total
The final test (test)	bdb (5)	5*50%	2,50
Tasks performed in the classroom	db, dst, bdb (4,3,5)	Average (4+3+5)/3=4 ? 4*20%	0,80
Homework	ndst, db, dst (2,4,3)	Average (2+3+4)/3=3 ? 3*20%	0,60
Attendance	6 obecności na 8	Participation of attendence 6/8=0,75 ? 0,75*10%	0,08

9. The learning contents with the form of the class activities on which they are carried out
Lecture, laboratory:

1. Fundamentals of Econometrics

   Measurement scales

   Assumptions of the classical regression model

   Steps of building model

2. Multiple linear regression model

   Matrix notation

   Estimation of the model

   Assumptions of the Ordinary Least Square Estimator

   Verification of the statistical properties

3. Fundamentals of Prediction

   Assumptions of the Prediction Theory

   Investigation of prediction errors - ex ante analysis, ex post analysis

   Forecasting evaluation methods

10. Required training aids [15] - classroom allowing any arrangement of chairs

11. Literature:

a. Basic literature (listed items must be in resources of University of economy):

- W. H. Greene, Econometric analysis, Prentice Hall, 7-th edition, 2011.
- Chatfield C., Time-series Forecasting, 2000, Chapman & Hall CRC

b. Complementary literature, regulation as above:

- Osińska M (red) (2007) Ekonometria współczesna. TNOiK, Toruń (in polish)
- Cieslak M., Prognozowanie gospodarcze. Metody i zastosowania, 2005, PWN, Warszawa, wydanie czwarte (in polish)

12. Available educational materials divided into forms of class activities (Author's compilation of didactic materials [16], e-learning materials, etc.) Author's presentations; Structure of the final project, Individual data.

13. Teachers implementing particular forms of education

Form of education	Name and surname
1. Lecture	Marcin Fałdziński
2. Laboratory	Marcin Fałdziński
3.	
4.	

....
Date Signature of the person responsible for the subject

[1] *A maximum of 3 forms of class activities for first cycle and second cycle studies or 4 forms of class activities for engineering studies are allowed. Forms of activities in direct contact: lectures, auditorium classes , laboratory classes, tutorials, seminars, fieldwork, clinical practice, sports, language classes, project classes. Forms of class activities in indirect contact: consultation, project classes, remote classes.*

[2] PWS: Number of hours, student's individual work

[3] ECTS: 1 ECTS = 25 hours of student workload, ie. Participation in class activities and student's individual work

[4] In the absence of relations or effects no must be entered

[5] Number of outcomes should not exceed three for each group.

[6] In accordance with section 5 of subject description.
[7] Choose among: 1. **Explaining methods**: informative lecture, problem lecture, conversational lecture, storytelling, description, programmed text**; 2. Collaborating methods**: Problem - classic, situational, brainstorm, practical exercise methods - project, case studies, SWOT analysis, laboratory, experiments, observations, field measurements, a panel roundtable discussion, scored, seminar, paper; 3. **Demonstrating methods**: show, exhibition, drama, simulation
[8] Each learning outcome must have an assigned a method for verification / assessment, eg .:
Knowledge: written work, tests, multiple tests, research report, project, oral statements (including substantive contribution to the discussions, debates, simulations), interpretation of the text, etc.
Skills: participation in discussion and debate, simulation and staging (eg. the election campaign), analysis of information on a given topic, folders, projects, exhibitions, promoting university or local community, etc., Performing tasks individually or in groups, etc.
Social competence: tests, self-assessment (oral / written), peer/ teacher assessment, observation, portfolios, case studies, etc.
[9] The source of learning outcomes is a matrix of effects adopted for fields of study. From there, a teacher should download the symbols of effects applicable to the subject. Learning outcomes do not determine what the lecturer is to provide the students with, but define what knowledge, skills and competence students will be able to demonstrate after completion of the course and the instructor proves it. It is recommended that a description of each learning outcome begins with a verb in active voice, eg. Student knows, defines, modifies, organizes ...
[10] Description of effects carried out on the subject elaborates the field of study effects.
[11] Knowledge about facts, principles and laws of nature, about the human mind and society, practically - associated with professional experience relating to the social ability to cooperate and communicate with different types of people and experts. Examples of verbs to be used: know, enumerate, define, classify, describe, evaluate, judge, to distinguish
[12]. Skills: the ability to complete tasks and solve problems specific to the field of learning or professional activity; Practical: the student can do something, to demonstrate, to change, to create; Cognitive: analysis, synthesis, comparison, evaluation.
[13] Social competence: the ability to shape their own development with autonomous and responsible participation in professional and social life, including the ethical context of their conduct; component knowledge and skills, have developed in the course of operation. Examples of verbs to use: listen, speak, communicate, solve problems, challenge, propose, revise, verify, choose.
[14] Recommended rules of grading
Percentage of each activity in the final evaluation:

The final test (test)	up to 50%
Tasks performed in the classroom	at least 20%
Homework	at least 20%
Attendance	up to 10%

Example calculation of the final grade

Participation	Grades	Calculations	To the final grade
Test	bdb (5)	5*50%	2,50
Classroom performance	db, dst, bdb (4,3,5)	Average (4+3+5)/3=**4** → 4*20%	0,80
Homework	ndst, db, dst (2,4,3)	Average (2+3+4)/3=**3** → 3*20%	0,60
Attendance	6 obecności na 8	Participation of attendence 6/8=**0,75** → 0,75*10%	0,08
Final result			

An example of the scale of assessment using a variant of point assessment:

0% - 60%	ndst	81% - 90%	db
61% - 70%	dst	91% - 93%	db+
71% - 80%	dst+	94% - 100%	bdb

[15] Select from: a specialized laboratory, teaching equipment, teaching aids, specialized software (name and version), no special requirements.
[16] Arbitrary set of teaching materials used by the teacher while giving classes