

## FACULTY OF COMPUTER SCIENCE AND MANAGEMENT

**SUBJECT CARD****Name in Polish** MODELOWANIE MAKROEKONOMICZNE**Name in English** MACROECONOMIC MODELING**Main field of study (if applicable):** Management**Specialization (if applicable):** Business information systems (BIS)**Level and form of studies:** 2nd level, full-time**Kind of subject:** obligatory**Subject code** EKZ1183**Group of courses** NO

	Lecture	Classes	Laboratory	Project	Seminar
Number of classes organized by the University (ZZU)	<b>15</b>	<b>15</b>			
The total number of hours of student workload (CNPS)	<b>90</b>	<b>60</b>			
Form of crediting	<b>Exam</b>	<b>credit with a grade</b>			
For a group of courses final course mark (X)					
Number of points ECTS	<b>3</b>	<b>2</b>			
including the number of points corresponding to the classes of practical (P)		<b>2</b>			
in the number of ECTS credits corresponding to the classes requiring direct contact (BK)	<b>1,5</b>	<b>0,5</b>			

\*niepotrzebne skreślić

**PREREQUISITES FOR KNOWLEDGE, SKILLS AND OTHER POWERS**

1. A course in microeconomics

**COURSE OBJECTIVES**

C1 Knowledge and understanding of the basic assumptions of macroeconomic models.

C2 Understanding the macroeconomic processes in the context of economic growth and development.

C3 Ability to identify and analyze effects of economic policies on economic development.

### SUBJECT LEARNING OUTCOMES

The scope of knowledge:

PEK\_W01 Student has knowledge of the place of economics in the sciences, and of the substantive and methodological links with other scientific disciplines. Understands links between the macro- and micro-economics.

PEK\_W02 Student knows and understands factors influencing the pace of growth of the national and the world economy. Understands the effects of chosen policies and social changes on the economy.

PEK\_W03 Student understands the most important assumptions of economic models and their implications for the interpretation of model results.

The range of skills:

PEK\_U01 Understands and is able to use theoretical knowledge in economics and related disciplines, in order to analyze and interpret problems of macroeconomic nature.

PEK\_U01 Student is able to identify and solve a model, which is relevant to the chosen economic problem;

The scope of social competence:

PEK\_K01 Can discuss possible formulations of macroeconomic problems and propose their solutions. Understands benefits and risks associated with usage of different economic models.

Course content		
Type of course - lecture		Number of hours
Lec1	Stylize facts about the economy: the most important economic indicators; a current state of the Polish and world economy	1
Lec2	Production functions and optimal wage setting	1
Lec2 Lec3	Solow model of economic growth: balanced growth paths of capital and consumption; the role of productivity shocks; predictions of the model	3
Lec4	Ramsey model: microeconomic foundations (consumer inter-temporal utility function; budget constraints and consumer optimal behavior)	2
Lec5 Lec6	Ramsey model: balanced growth paths of capital and consumption; the role of interest rate and the saving rate;	4
Lec7	Modeling markets with non-rational participants: behavioral economics;	2
Lec8	Agent based models and their applications	2
	Total	15

Type of course - classes		Number of hours
Cl1	Stylize facts about the economy; basic relations between macroeconomic variables	1
Cl2 Cl3	Solow model: firm optimal behavior, balance growth paths of consumption and capital; model predictions; effects of fiscal policies	4
Cl4	Microeconomic foundations of Ramsey model	2
Cl5 Cl6	Ramsey model: balanced growth paths of capital and consumption; the role of interest rate and the saving rate; Social planer perspective.	4

Cl7	Agent based models and their applications	2
Cl8	Final test	2
	Total hours	<b>15</b>

Type of course - laboratory		Number of hours
La1		
La2		
La3		
	Total hours	

Type of course - project		Number of hours
Pr1		
Pr2		
Pr3		
	Total hours	

Type of course - seminar		Number of hours
Se1		
Se2		
Se3		
	Total hours	

TOOLS FOR TEACHING	
Lecture N1. Lecture information N2. Multimedia presentation N3. Lecture problem Classes N4. Solving practical exercises N5. Discussion N6. Presentations	

### EVALUATION OF THE EFFECTS OF EDUCATION ACHIEVEMENTS

Ratings (F - forming (during the semester), P - Summary (at the end of the semester))	Number of training effect	Way to evaluate the effect of education achievement
F1	PEK W03 PEK U01 PEK U02	Test
F2	PEK K01	Participation in discussions and oral presentations
F3	PEK W01 PEK W02 PEK W03 PEK U01	The written exam
P (lecture) = F3 P (classes) = $0,8 \cdot F1 + 0,2 \cdot F2$		

<b>BASIC AND ADDITIONAL READING</b>	
<b><u>BASIC READING:</u></b>	
[1] N. Gregory Mankiw, <i>Macroeconomics</i> , South-Western College Pub , 2008	
[2] Blanchard, Olivier, <i>Macroeconomics</i> , <u>Prentice Hall</u> , 2000.	
<b><u>ADDITIONAL READING:</u></b>	
[1] R. Milewski (red.), <i>Podstawy ekonomii. Ćwiczenia, zadania, problemy</i> , PWN, Warszawa 2002 i kolejne wydania.	
<b>COURSE SUPERVISOR (NAME, ADDRESS E-MAIL)</b>	
<b>Katarzyna Maciejowska, <u><a href="mailto:katarzyna.maciejowska@pwr.wroc.pl">katarzyna.maciejowska@pwr.wroc.pl</a></u></b>	

**MATRIX OF CORRELATION BETWEEN EDUCATIONAL EFFECTS FOR SUBJECT  
MACROECONOMIC MODELING  
AND EDUCATIONAL EFFECTS FOR MAIN FIELD OF STUDY MANAGEMENT  
AND SPECIALIZATION **Business Information systems****

<b>Subject educational effect</b>	<b>Correlation between subject educational effect and educational effects defined for main field of study and specialization (if applicable)**</b>	<b>Subject objectives***</b>	<b>Programme content***</b>	<b>Teaching tool number***</b>
<b>PEK_W01</b> (knowledge)	K2_ZARZ_W01 K2_ZARZ_W02	C1	Lec2, Lec4÷ Lec5 Lec7÷Lec8	N1, N2, N3
<b>PEK_W02</b>	K2_ZARZ_W02 K2_ZARZ_W03	C2, C3	Lec1÷Lec8	N1, N2, N3,
<b>PEK_W03</b>	K2_ZARZ_W13	C1	Lec2, Lec4÷ Lec5 Lec7÷8	N1, N2, N3,
<b>PEK_U01</b> (knowledge)	K2_ZARZ_U01	C2, C3	Lec2÷Lec8 C11÷C17	N1, N2, N3, N4, N5, N6
<b>PEK_U02</b>	K2_ZARZ_U01 K2_ZARZ_U04 K2_ZARZ_U14	C1, C2	Lec2÷Lec8 C12÷C17	N1, N2, N3, N4, N5, N6
<b>PEK_K01</b> (competence)	K2_ZARZ_K01 K2_ZARZ_K02 K2_ZARZ_K08	C1, C2, C3	Lec2÷Lec8 C12÷C17	N1, N2, N3, N4, N5, N6

\*\* - type of directional symbols / specialization of learning outcomes

\*\*\* - from the table above