

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) | 15 | 15 | | | |
| The total number of hours of student workload (CNPS) | 90 | 60 | | | |
| Form of crediting | Exam | credit with a grade | | | |
| For a group of courses final course mark (X) | | | | | |
| Number of points ECTS | 3 | 2 | | | |
| including the number of points corresponding to the classes of practical (P) | | 2 | | | |
| in the number of ECTS credits corresponding to the classes requiring direct contact (BK) | 1,5 | 0,5 | | | |

*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 |
|--------------------------|---|-----------------|
| C11 | Stylize facts about the economy; basic relations between macroeconomic variables | 1 |
| C12 C13 | Solow model: firm optimal behavior, balance growth paths of consumption and capital; model predictions; effects of fiscal policies | 4 |
| C14 | Microeconomic foundations of Ramsey model | 2 |
| C15 C16 | 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 | 15 |

| 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*F1+0,2*F2 | | |

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

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

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