

FACULTY OF ELECTRICAL
ENGINEERING**SUBJECT CARD**

Name in Polish: **Praca dyplomowa magisterska**
 Name in English: **Master's thesis**
 Main field of study (if applicable): **Electrical Engineering**
 Specialization (if applicable): **Renewable Energy Sources**
 Level and form of studies: **2nd level, full-time**
 Kind of subject: **optional**
 Subject code: **ELR053159D**
 Group of courses: **NO**

| | Lecture | Classes | Laboratory | Project | Seminar |
|--|---------|---------|------------|----------------------|---------|
| Number of hours of organized classes in University (ZZU): | | | | 180 | |
| Number of hours of total student workload (CNPS): | | | | 540 | |
| Form of crediting: | | | | crediting with grade | |
| For group of courses mark (X) final course: | | | | | |
| Number of ECTS points: | | | | 18 | |
| including number of ECTS points for practical (P) classes : | | | | 18 | |
| including number of ECTS points for direct teacher-student contact (BK) classes: | | | | 12.60 | |

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES**SUBJECT OBJECTIVES****SUBJECT LEARNING OUTCOMES***relating to knowledge:**relating to skills:*

PEU_U01 xx

PEU_U02 xx

relating to social competences:

PEU_K01 xx

PROGRAMME CONTENT

| Form of classes - project | | Number of hours: |
|---------------------------|----|------------------|
| Proj 1 | xx | 180 |
| Total hours: | | 180 |

TEACHING TOOLS USED**EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT**

| Evaluation <i>F – forming (during semester) P – concluding (at semester end)</i> | Educational effect number | Way of evaluating educational effect achievement |
|---|---------------------------|--|
|---|---------------------------|--|

| |
|---|
| PRIMARY AND SECONDARY LITERATURE |
|---|

| |
|----------------------------|
| PRIMARY LITERATURE: |
|----------------------------|

- | |
|--|
| <ol style="list-style-type: none">1. Hameyer K., Belmans R.: Numerical modeling and design of electrical machines and devices, WITT Press, Southampton, 19992. Di Barbra P., Savini A., Wiak S. : Field models in electricity and magnetism, Springer, 20083. Sadiku Matthew N.O. : Numerical techniques in electromagnetics, CRC Press, 20014. Jianming Jin: The finite element method in electromagnetics, John Wily & Sons, Inc., 20025. Bianchi Nicola: Electrical machine analysis using finite elements, CRC Taylor & Francis Group, 2005.6. Meunier Gerard : The finite element method for electromagnetic modeling, John Wily & Sons, Inc., 20087. Flux 2D v. 11.1, User guide, CEDRAT, 2012 |
|--|

| |
|------------------------------|
| SECONDARY LITERATURE: |
|------------------------------|

- | |
|---|
| <ol style="list-style-type: none">1. Champan S.J.: Electric machinery fundamentals, McGraw-Hill, N.Y., 20052. Zienkiewicz O.C., Taylor R.L., Zhu J.Z.: The finite element methods: its basis and fundamentals, Elsevier B-H, Amsterdam, 2005 |
|---|

| |
|---------------------------|
| SUBJECT SUPERVISOR |
|---------------------------|

| |
|---|
| , |
|---|