DESCRIPTION OF THE COURSES

- Course code: **ELR3105**
- Course title: CONSTRUCTION AND TECHNOLOGY OF ELECTRIC MACHINES
- Language of the lecturer: Polish

Course form	***Lecture***	***Classes***	***Laboratory***	***Project***	***Seminar***
*Number of hours/week**	*2*				
*Number of hours/semester**	*30*				
Form of the course completion	*Written test*				
ECTS credits					
Total Student's Workload					

- Level of the course (basic/advanced):
- Prerequisites: Courses of Electric machines part I and II

Name, first name and degree of the lecturer/supervisor: Jan Zawilak Ph.D., D.Sc. Eng.

- Names, first names and degrees of the team's members:
  Ludwik Antal D.Sc. Ph.D. Eng., Tomasz Zawilak M.Sc. Eng.
- Year: V Semester:.IX
- Type of the course (obligatory/optional): optional

Aims of the course (effects of the course): Coming to know of the principles of construction and basic sub-assemblies manufacture of AC and DC electric machines.

- Form of the teaching (traditional/e-learning): traditional
- Course description: Basic overall dimensions, construction types, production technology of basic parts of DC and AC electric machines (stators, rotors, solid and laminated magnetic cores, rotor and stator windings, shafts and frames).
- Lecture:

Particular lectures contents	*Number of hours*
1. *Introducion to the course, curriculum, demands.*	*2*
2. *Basic overall dimensions of electric machines, type , batch.*	*2*
3. *Construction types of electric machines.*	*2*
4. *Basic components of electric machines Construction types of electric machines.*	*2*
5. *Construction and production technology of DC machines magnetic.*	*2*
6. *Construction and production technology of AC machines magnetic cores.*	*2*
7. *Construction and production technology of distibuted windings (armture) low voltage electric machines.*	*2*
8. *Construction and production technology of distibuted windings (armture) high voltage electric machines.*	*2*
9. *Construction and production technology of distibuted special windings.*	*2*
10. *Construction and production technology of excitation windings*	*2*

(DC and AC machines).	*2*
11. Construction and production technology of special windings.	*2*
12. Frames and magnetic cores of stators.	*2*
13. Shafts and magnetic cores mount of rotors.	*2*
14. Sliding contact (commutator, slip rings, brushes, brush rockers).	
15. The course include teaching trips to industrial plants producing or repairing electric machines (ALSTOM Power Generators, CANTONI MOTOR (Indukta, Besel lub Celma))	*2*
Selection of industrial plant depends on course profile that may concern small, medium or large power machines	

- Classes – the contents:
- Seminars – the contents:
- Laboratory – the contents:
- Project – the contents:
- Basic literature:
  - Dąbrowski M. - *Projektowanie maszyn elektrycznych prądu przemiennego* WNT, Warszawa 1994 r.
  - Dąbrowski M. – *Konstrukcja maszyn elektrycznych* WNT Warszawa 1978 r.
  - Kordecki A.: - *Budowa maszyn prądu stałego* WNT Warszawa 1973 r.
- Additional literature:
- Zawilak J.- *Uzwojenia przełączalne maszyn elektrycznych prądu przemiennego* Wydaw. Politechniki Wrocławskiej 1986 r.
- Conditions of the course acceptance/credition:

Passing of a written test and participation in classes.

***** - depending on a system of studies