(faculty stamp) **Syllabus**

1. Name of the subject: PRE-DIPLOMA PROJECT	**2. Course code:**
3. Valid in academic year: 2016/2017	
4. Course: MSc (second degree programme)	
5. Type of studies: full time stationery course	
6. Field of study: POWER ENGINEERING	
7. Profile of studies: General academic	
8. Programme: CLEAN FOSSIL AND ALTERNATIVE FUELS ENERGY (KIC INNOENERGY)	
9. Semester: 1	
10. Responsible unit: RIE-3	
11. Lecturer: dr hab. inż. Krzysztof Pikoń	
12. Group of subjects: Specializations subject	
13. Status: Obligatory	
14. Language of instruction: English	
15. Prerequisites: None	
16. Course objectives: This module is designed in a form of a project conducted by teams under the leadership of project management and is focused on solving the real program (challenge). The challenge is always related to the issue which is important to the industry, society and economy. The main objective is to deepen the making value judgments skills and the knowledge already gained in other modules of the program, shape the multidimensional thinking taking into account technological, economic, environmental and social issues and implement analytic skills, making value judgments together with the art of presentation, discussion and shaping teamwork skills. The module improves skills in gathering information in a real life situations on needs to be covered and problems to be solved. Finally students makes the proposals on how results could improves things.The invented solutions should address main challenge in relation to customer, problem, functionality, business model and development.	

17. Learning outcomes:[1]

Nr	Description of learning outcome	Method of assessments	Type of classes	Reference to learning outcomes
1	Demonstrates knowledge necessary to understand social, economic, legal and other non-technical conditions of an engineer's work and problem related to challenge given in the subject	Project assessment	project	K2A_W01
2	Search, collects, integrates and interprets information, draws conclusions, justifying opinionsrelated to the challenge given in the subject. Performs technical, economic and social analysis. Prepares high quality report form the activity containing his/her own analyses	Project /pitch assessment	project	K2A_U01 K2A_U03 K2A_U10 K2A_U13 K2A_U14

[1] 5-8 learning outcomes should be given

3	Formulates and solves an engineering problem related to the challenge given in the subject.	Project/pitch assessment	project	K2A_U25 K2A_U26
4	Is aware of the importance of understanding non-technical aspects including its impact on the environment and responsibility for the decisions taken. The module strengthen teamwork, leadership and assuming various roles competencies. Thinks and acts in a creative and enterprising manner	Project /pitch assessment	project	K2A_K2A02 K2A_K2A03 K2A_K2A04 K2A_K2A06

18. Type of classes and their duration

Project: 45h

19. Content of the course:

The module is designed in challenge driven education style with elements of project based learning.
The whole group of students receive the common challenge. During first classes the challenge is detailed discussed and the KPIs are established. Then the whole group is divided in to working groups (teams) and the leaders are nominated together with the leader of the whole group (project manager).
Teams are solving the same problem independently. Finally the challenge solution is delivered by all teams and is compared with each other. In addition all teams should deliver SWOT analysis and feasibility study. The pitches on elaborated solutions is delivered by all teams. This makes the internal competition between teams. The comparison is made on the basis of defined previously KPIs. Finally the whole group is creating the common report with clearly indicated responsibility parts. The common conclusions and executive summary is crated on the basin of contribution of all teams and finally delivered by project manager.
The solution relevant to the challenge should be assessed valued to all relevant stakeholders.

20. Examination:no

21. Basic literature:

All sources of information relevant to the challenge

22. Other reading:

Scientific journals availabale in university network (Scopus, Science direct etc.)

23. Work load of the student necessary to achieve the learning outcomes

Lp.	Type of classes	Number of contact hours / student work
1	Lectures	/
2	Recitations	/
3	Lab	
4	Project	45/45
5	Seminar	
6	Other (participation in consultations associated with project execution)	
	number of hours (subtotal)	30/30

24. Total number of hours: 90

25. Number of ECTS credits:[2]3

26. Number of ECTS credit points gained during classes (contact hours): 1

27. Number of ECTS credits gained during practice oriented classes (labs, projects): 2

[2] 1 ECTS point – 30 hours workload

26. Remarks:

Teaching tools: **project based learning, challenge driven education**

The overall assessment consist of two steps:

1. Check of fulfilling of module LO consequently OLOs criteria.
2. Assessment and grading of the quality of students work and reached LO.

EIT OLOs assessed in the subject :

- Value judgments and sustainability competencies (EIT OLO 1)
- Entrepreneurship skills and competencies (EIT OLO 2)
- Creativity skills and competencies (EIT OLO 3)
- Innovation skills and competencies (EIT OLO 4)
- Research skills and competencies (EIT OLO 5)
- Intellectual transforming skills and competencies (EIT OLO 6)
- Leadership skills and competencies (EIT OLO 7)

The Method of assessments indicated in point 17 includes assessment of learning outcomes and OLOs

Grading:

Grading formula: $FG = PMWF_P * PMG_P + PMWF_{Pi} * PMG_{Pi}$

Where:

- FG-finalgrade
- $PMWF_P$ – Project part weighting factor – 0,7
- PMG_P – Grade of achieved LOs relevant to project criterion
- $PMWF_{Pi}$ –Pitch part weighting factor – 0,3
- PMG_{Pi} – Grade of achieved LOs relevant to pitch

All LO weighting factors associated with part of the module (PM) equal 1.

Accepted:

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(Date and signature of the responsible instructor)

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(*date and signature of the director of the institute, chair, Director of Foreign Language College/head or director of inter-faculty unit)*