



## **SCIENCE – TECHNOLOGY - ENVIRONMENT**

### **Course description form**

**2012/2013**

- 1. Course title:** Efficient Teaching
- 2. Course language:** ENGLISH
- 3. Course type:** **(obligatory to complete study)**
- 4. Year of study, semester:** **III year, 6<sup>th</sup> semester**.....
- 5. Name of co-ordinator(s):** Iwona Maciejowska.....
- 6. Collective point:**
- 7. Type of course :**
- Tutorials – tutor:** **dr Iwona Maciejowska**, dr Justyna Bugaj, dr Paweł Bernard, dr Michał Woźniakiewicz, dr Paul Yates, dr Wiliam Byers.....
- Number of hours: 16.....semester: winter.....
- Method of evaluation: **individual and group work: preparation of project, mental map, SWOT analysis; reflective diary** .....
- Condition of credits: .....



**8. Additional information about method and condition of credits:**.....

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**9. Prerequisites:** -

**10. Objective of the course / expected learning outcomes:** .....

**Student will be able to:**

- **Write learning outcomes, design a course**
- **Match a method of teaching&learning to learning outcome**
- **Use PBL (problem and project-based learning) and active methods of teaching and learning in higher education**
- **Organize team work**
- **Motivate students**
- **Evaluate his/her own teaching**
- **Deal with large class**
- **Assess students' work**
- **Use of multimedia in teaching and learning process (clickers, interactive boards etc.)**
- **Design e-learning course**

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**11. Teaching methods:** short introductory presentations, discussions, reflections, case study, projects, RPG, exercises .....

**12 A. Full description of the course / course contents:** .....

The course consists of 8 sessions composed of a short lecture followed by group work of the participants or vice versa. "Active" methods of teaching and learning will be applied.

Participants are expected to be prepared especially in the case of reflection of their own teaching and learning experiences.



1. **Introduction – many roles of academic teacher; what administration, students, deans expect from teaching staff. Intercultural challenges, exchange of experiences from various teaching and learning environments (foreign universities), staff and self-development opportunities**
2. **Learning Outcomes– What they are ? How to write learning outcomes? Generic and discipline specific learning outcomes. Program and course design. Challenges in implementing LO-based education. Consequences of using LO**
3. **Team work – when and why? Team roles (Belbin), team development\ team building,**
4. **Problem and context based learning – methods of university teaching and learning, why PBL? Structure of PBL (what does trigger mean?) Relation between lecture-based and PBL. General outcomes of PBL, both for students and a teacher.**
5. **Project based learning**
6. **Lecturing/large class teaching - challenges and possible solutions**
7. **Assessment - basic rules and forms. How to assess students' prior knowledge? How to assess students' learning and performance? How to assess teaching?? How to assess team work?**
8. **E-learning and b-learning, use of multimedia in teaching and learning process (clickers, interactive boards etc.)**

**12 B. Short description of the course (max. 70 words):** .....

The course consists of 8 sessions composed of a short lecture followed by group work of the participants or vice versa. “Active” methods of teaching and learning will be applied.

List of topics which will be covered: **roles of academic teacher; staff and self-development opportunities, learning outcomes, team work , Problem and context based learning , Project based learning, lecturing/large class teaching, students' assessment , e-learning and b-learning, use of multimedia.**

**13. Recommended reading:** .....

Eilks, I., Byers, B. (Eds.), *Innovative Methods of Teaching and Learning Chemistry in Higher Education*, London: RSC (2009)

*Possibilities: A Practice Guide to Problem-based Learning*

*in Physics and Astronomy*, Derek Raine, Sarah Symons (eds.)

Published by The Higher Education Academy Physical Sciences Centre

[http://www.heacademy.ac.uk/assets/ps/documents/practice\\_guides/ps0080\\_possibilities\\_problem\\_based\\_learning\\_in\\_physics\\_and\\_astronomy\\_mar\\_2005.pdf](http://www.heacademy.ac.uk/assets/ps/documents/practice_guides/ps0080_possibilities_problem_based_learning_in_physics_and_astronomy_mar_2005.pdf)

Burewicz, A., Miranowicz, N., Miranowicz, M. *A Guidebook of Methods Used in Continuous Learning*, Jelenia Góra (2006)

*Jak kształcić studentów chemii i kierunków pokrewnych? Podręcznik nauczyciela akademickiego*, red. I. Maciejowska, Kraków: Wydział Chemii UJ (2008),



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<http://www.chemia.uj.edu.pl/maciejow/skrypt/index.htm>

Race, P. (Ed.): *2000 Tips for Lecturers*, London: Kogan Page (1999),

Fry, H., Ketteridge, S., Marshall, S., *A Handbook for Teaching & Learning in Higher Education. Enhancing Academic Practice*, 2<sup>nd</sup> edition, London and Sterling VA: Kogan Page (1999).