SYSTEMOLOGY of SCIENTIFIC RESEARCH

(Lecture course for study program
“Management of Education” 2015/2016)

PREFACE (General characteristic of study course)
Research as a problem solving – gaining new Life experience for Life

INTRODUCTION (Basic Concepts of the Course)
Systems Thinking (Systemic reflection of observed phenomena in human’s consciousness, Systems Theory and Systemology as applied systems theory for Practice: cognition, consideration, behaviour)

- **Scientific Research** (cognitive/fundamental, behavioural/applied and educational research as gaining Life experience for Life)
- **Education** (management and execution of educational activities – organization and execution the processes of gaining Life experience for Life)

PART 1 – Philosophical and Psychological background of Human’s life activities: square of Mankind’s Great Thoughts - World, Human, Life, Society

World as manifold set of interconnected phenomena (changing bodies)
Human as alive spiritual body

Life as manifold set of interrelated human’s activities
  (cognition, consideration, behaviour)
Society as manifold set of interactive humans
Education as Life experience (knowledge, values, skills) for Life  
(cognition, consideration, behaviour)

PART 2 – Systems Theory (systemic reflection of sensed world  
in human’s conscious world of thoughts)

PART 3 - Systemic Management of Education (Educational  
activities)

CONCLUSION

EPILOGUE (Final evaluation of study process results)

List of recomended study materials

- **A.Broks** Selected study materials available in internet :

  Systemology of Scientific Research 28-29.10.14  
  [https://failiem.lv/u/uep8vsc](https://failiem.lv/u/uep8vsc)

  Systemology of Scientific Research 3.02.16  

- **E.B Agoshkova.** SYSTEMS THINKING IN THE TWENTY-FIRST  
  CENTURY.  
  [http://web.bu.edu/wcp/Papers/TKno/TKnoAgos.htm](http://web.bu.edu/wcp/Papers/TKno/TKnoAgos.htm)  
  (accessed 6.09.2015)

- **Heylighen, F., Joslyn, C.** (1992) WHAT IS SYSTEMS THEORY?  
  (accessed 1.02.2016)

- Wikipedia Systems (thinking, approach, science etc.)  
  (accessed 1.02.2016)

- **Systems Thinking**  
  [http://www.hent.org/world/rss/files/systems_think.htm](http://www.hent.org/world/rss/files/systems_think.htm)  
  (accessed 1.02.2016)
• **Usage of Systems Thinking**

• **Center of Ecoliteracy  **Systems thinking


  [https://books.google.lv/books?id=tG6QKNgYs9sC&pg=PR3&hl=lv&source=gbs_selected_pages#v=onepage&q&f=false](https://books.google.lv/books?id=tG6QKNgYs9sC&pg=PR3&hl=lv&source=gbs_selected_pages#v=onepage&q&f=false) (accessed 1.02.2016)

• **Basic Concepts of the Systems Approach**

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**Video materials**

* Meeting with Peter Senge
  [http://www.youtube.com/watch?v=b1G0Fs__u4g](http://www.youtube.com/watch?v=b1G0Fs__u4g)

* A Theory of a System for Educators and Managers
  [http://www.youtube.com/watch?v=2MJ3lGJ4OFo](http://www.youtube.com/watch?v=2MJ3lGJ4OFo)

* Systems Thinking
  [http://www.youtube.com/watch?v=RQpirPgfkYk](http://www.youtube.com/watch?v=RQpirPgfkYk)
  [http://www.youtube.com/watch?v=XAI85rSLfPY&feature=endscreen](http://www.youtube.com/watch?v=XAI85rSLfPY&feature=endscreen)
  [http://www.youtube.com/watch?v=97KnG2Q4U6Q](http://www.youtube.com/watch?v=97KnG2Q4U6Q)
  [http://www.youtube.com/watch?v=OhbhaN3IGP4](http://www.youtube.com/watch?v=OhbhaN3IGP4)