

**Master of Research in Management Sciences (MRes)**

**Academic Year: 2008-2009**

**Module: 1**

**Course: Epistemology of Science**

**Code: 08CMR50379**

**ECTS Credits: 3**

**Credit Category: Compulsory**

**Faculty: Eduard Bonet Guinó**

**Description:**

We can say that knowledge is not mere information but information submitted to judgment, accepted with conviction and integrated in our personal web of beliefs. Judgment, conviction and integration require reasoning in its forms of logical proof and criticism, rhetorical persuasion and heuristic creativity; which are developed both in internal reflections and in social dialogues.

Knowledge creation and reasoning pervade almost all human activities. We reason when we perceive, observe, do experiments, communicate, read, write, propose hypotheses, build theories, deduce, criticize and evaluate, corroborate or falsify theories. Reasoning is necessarily involved in common situations, professional activities and scientific research, which includes managerial performance and doctoral studies.

Character: The seminar has a propedeutic character for the MRes Program and it is recommended at the beginning of the studies.

**Objectives:**

General aims: Its general aims are:

- To stimulate and improve our creative and critical skills in reasoning.
- To improve our abilities for formulating, criticizing and communicating theories, especially for analyzing papers and writing dissertations.

Specific aims: Its specific aims are to provide conceptual instruments for and to introduce to the following subjects:

- Epistemology of Science.
- Rhetoric of enquiry and communication.
- Corporate learning theories.

## Syllabus:

- Introduction to Reasoning: Aspects of reasoning: logical proof, rhetorical persuasion and Heuristic discovery.
- Reasoning as a psychological activity and as its product expressed in natural or formal languages: relationships of reasoning with Psychology and with Linguistics, in its aspects of syntax, Semantics and Pragmatics.
- Kinds of reasoning: deductive, inductive, abductive and analogical or metaphorical reasoning.
- Reasoning in Research and Management.
- Reasoning, Knowledge, Action and Learning.
- Arts of Reasoning: Introduction to Logic, Rhetoric, Dialectics, Heuristics, Pragmatics, Hermeneutics.
- Elements of Logic: Logic of propositions as a calculus and as a theory of deduction. Classical and modern theories of predicates. Common-sense reasoning and artificial intelligence.
- Elements of Rhetoric: Means of persuasion. Rhetorical force in relation to logical proof. Rhetorical functions in values creation and human groups integration. Arguments and argumentative markers.
- Elements of Rhetoric of Enquiry: Functions of Rhetoric in scientific research. Rhetoric of metaphors and narratives.
- Analogical and metaphorical reasoning. Logic, Rhetoric and Dialectics in concept formation and definition.
- Axiomatic-deductive theories: The model of geometry. Logic and Heuristics in the process of proving propositions, laws or theorems. Logic, Rhetoric and Dialectics in the process of defining concepts. Research on the foundations of theories.
- The evolution of the concept of Knowledge.
- Popper's solution to the problem of induction.
- Kuhn's Scientific Revolutions.
- Lakatos' methodology of scientific research programmes.
- Text analysis:
  - Plato "Meno", this part of the dialogue is known as "The Reminiscence".
  - Shakespeare "Julius Caesar", the public addresses by Brutus and Marc Anthony from the film by Marlon Brando. Popper "My Solution to the Problem of Induction".
  - Lakatos "Methodology of Scientific Research Programs", the initial part.

## Bibliography:

- Bonet, E. Lecture notes and hand-outs
- Bonet, E. "A story about your life. Addressed to Doctoral Students" 2000. Barcelona, ESADE-URL / EUDOKMA.
- Bonet, E.; Sauquet, A. "Arts of reasoning involved in knowledge, action and learning". 2001. Barcelona, Paper Euram.
- Bonet, E.; Sauquet, A, Bou, E. "A Dialectical View on Competing Concepts of Knowledge and Learning", 2002 European Conference on Organizational
- Knowledge, Learning and Capabilities

### *Basic bibliography*

- Kuhn, TS. "The Structure of Scientific Revolution". The full text.
- Lakatos, I. and Musgrave, A. "Criticism and the growth of knowledge". The nature of a paradigm. 1970. Cambridge, Cambridge University Press. Falsification and the methodology of scientific research programs. Pages 91-196
- Popper, K. "Objective knowledge". An evolutionary approach. 1979. Oxford, Clarendon Press. 1. Conjectural knowledge: My solution of the problem of induction. Pages 1-31.

### *Complementary bibliography*

- Chalmers, AF. "¿Que es esa cosa llamada ciencia?" 1982. Madrid, Siglo XXI de España editores.
- Feyerabend, P. "Against method". 1987. London / New York, Verso.
- Kuhn, TS. "¿Qué son las revoluciones científicas?" y otros ensayos. 1996. Barcelona, Paidós / ICE UAB.
- Kuhn, TS. "La tensión esencial". Estudios selectos sobre la tradición y el cambio en el ámbito de la ciencia. 1993 (1982). Madrid. Fondo de cultura económica.
- Popper, K. "Conjectures and refutations". The growth of scientific knowledge. London, Routledge.
- Popper, K. "Unended Quest". An Intellectual Autobiography. 1993. London, Routledge.

### **Methodology:**

Theoretical sessions and practical sessions on:

- Life Stories of the doctorands
- Construction of bibliographical files: Procite
- Diaries and Research
- Rhetoric, Analysis of Julius Caesar by Shakespeare
- Exercises of logic
- Analysis of texts and narratives
- Bibliographical search

### **Assessment:**

Final written exam.

### **Timetable:**

Every Monday from 29/09/08 to 06/10/08  
Every Tuesday from 30/09/08 to 07/10/08  
Every Wednesday from 01/10/08 to 08/10/08  
Every Thursday from 02/10/08 to 09/10/08

From 09:00 h. to 12:00 h