



## COURSE DESCRIPTION

ACADEMIC CENTER <b>ROBERTO ALCÂNTARA GOMES</b> BIOLOGY INSTITUTE		DEPARTMENT <b>DEPARTMENT OF ANATOMY</b>		
COURSE NAME <b>SCIENTIFIC METHOD</b>		<input checked="" type="checkbox"/> CORE COURSE  <input type="checkbox"/> OPTIONAL COURSE	HOURS 30	CREDITS 2
PROGRAM / PROJECT NAME <b>PHYSIOPATHOLOGY AND SURGICAL SCIENCES</b> <u>Key Focus Area:</u> Urogenital System Operative technique and Experimental Surgery		DISTRIBUTION OF HOURS		
		TYPE OF CLASS	HOURS	N. OF CREDITS
		THEORETICAL	30	2
		PRACTICAL		
		TOTAL	30	2
PREREQUISITES		<input checked="" type="checkbox"/> Master's program course  <input checked="" type="checkbox"/> Doctorate's program course		

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This course presents an introduction to the main issues addressed by the philosophy of the scientific method. Certain aspects of particular importance for the natural sciences, such as the rationale for the scientific method, are covered in greater detail and presented in the form of a consensus between the different schools of thought.

The program includes the following topics:

**Theory of knowledge.**

**The logical foundations of scientific research:** Scientific research: invention and testing. Test of a hypothesis: its logic and strength. Confirmation and acceptability criteria. Laws and their role in scientific explanation. Theories and theoretical explanation. Concept formation. Theoretical reduction.

**Diversity of schools and concepts: K. Popper, I. Lakatos, T.S. Kuhn, P. Feyerabend.**

### BASIC BIBLIOGRAPHY

1. Chisholm RM: Theory of Knowledge. 3rd ed., New Jersey, Prentice Hall, 1989, pp. 104.
  2. Copi IM, Cohen C: Introduction to Logic. 9th ed., New Jersey, Prentice Hall, 1994, pp. 729.
  3. Feyerabend P: Against Method. London, Verso, 1988, pp. 296.
  4. Kuhn TS: The structure of scientific revolutions. 2nd ed. Chicago, The University of Chicago Press, 1970, pp. 210.
  5. Lakatos I: The Methodology of Scientific Research Programmes. Cambridge, Cambridge University Press, 1978, pp., 250.
  6. Nagel E: The Structure of Science. Problems in the Logic of Scientific Explanation. London, Routledge & Kegan Paul, 1961, pp. 618.
- Popper KR: The Logic of Scientific Discovery. New York, Harper and Row, 1958, pp. 480.

### PROGRAM / PROJECT COORDINATOR

DATE     	SIGNATURE
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