**Methodology of scientific research**

General Course Objectives: This course aims to guide students at achieving competence and proficiency in the theory of and practice to research. This fundamental objective can be realised through helping the students to develop the subject of their research, encourage the formation of higher level of trained intellectual ability, critical analysis, rigour, and independence of thought, foster individual judgement, and skill in the application of research theory and methods, and develop skills required in writing research proposals, reports, and dissertation; and

*In more specific practical aims, the present course aims to:*

• enable Master students understand what research is and what is not.

•raise awareness of crucial aspect of the nature of Knowledge and the value of scientific method.

• introduce the concept at the heart of every research project –the research problem- and to discuss what a researchable problem is.

• evaluate literature, form a variety of sources, pertinent to the research objectives.

• identify and justify the basic components of the research framework, relevant to the tackled research problem.

• explain and justify how researchers will collect research data.

• discuss how to cite sources.

• consider the kind of language to use in an academic written work.

• put forward a credible research proposal,

• warn the common mistakes in the field of research methodology.

**Course Structure**

The structure of the course is based on two approaches. The first is a cumulative approach which introduces, step-by-step, the contents of the academic subject of research theory and practice. The second is concerned with the involvement of Master students in the practical work in order to develop the skills needed to produce a good quality of final product.

**The Research Problem**: What is a Research Problem, selecting the Problem, sources of the Problem, Defining a Problem, Statement of a Problem, Delimiting a Problem, Evaluation of a Problem

**The Research Hypotheses**: Meaning of Hypothesis, Definitions of Hypothesis, Nature of Hypothesis, Functions of Hypothesis, Importance of Hypothesis, Kinds of Hypothesis. Characteristics of a Good Hypothesis, Variables in a Hypothesis, Formulating a Hypothesis, Testing the Hypothesis**The Research Approach**: The Philosophical Background, The Qualitative Approach, The Quantitative Approach, The Mixed-Methods Approach, Criteria for Selecting a Research Approach

**The Review of Literature**: Meaning of Review of Literature, Need of Review of Literature, Objectives of Review of Literature, Sources of Literature. How to Conduct the Review of Literature, Precautions in Library Use, Reporting the Review of Literature

**The Research Strategies**: What are the Research Strategies? Which Strategy to Choose? Case Studies Experiments, Phenomenology. Ground Theory (GT), Action Research, Mixed-methods, Longitudinal

**Data Collection Methods**: Questionnaires, Interviews, Focus Groups, Observation

**Sampling:**  Meaning and Definition of Sampling, Functions of Population and Sampling, Methods of Sampling, Characteristics of a Good Sample, Size of a Sample, The Sample Cycle

**Plagiarism:** Etymology, Legal aspects, Common forms of student plagiarism, Sanctions for student plagiarism, Criminal and negative behaviour by diploma mills, Plagiarism education, Factors influencing student´s decision to plagiarize

**Recommended literature:**

1. Cohen, L. Lawrence, M., & Morrison, K. (2005). Research Methods in Education (5th edition). Oxford: Oxford University Press.
2. Denscombes, M. (2010). The Good Research Guide: For small-scale social research projects. Maiden-Read: Open University Press.
3. Dornyei, Z. (2007). Research Methods in Applied Linguistics. Oxford: Oxford University Press.
4. Hoadjli, A.C. (2015). The Washback Effect of an Alternative Testing Model on Teaching and Learning: An exploratory study on EFL secondary classes in Biskra. Unpublished Doctoral Thesis, University of Mohamed Kheider, Biskra.
5. Kothari, C. R. (1980). Research Methodology: Research and techniques, New Delhi: New Age International Publishers.
6. Kumar, R. (2011). Research Methodology: a step-by-step guide for beginners (3rd edition). London, UK: TJ International Ltd, Padstow, Corwall.
7. Leedy, P. D. (1980). Practical Research: Planning and design. Washington: Mc Millan Publishing Co., Inc.
8. Singh, Y. K. (2006). Fundamental of Research Methodology and Statistics. New Delhi. New International (P) Limited, Publishers.
9. Wallinman, N. (2006). Your Research Project: A step-by-step guide for the first-time researcher. London: Sage Publications