

## COURSE DESCRIPTION

### Department of Service Courses

**Scientific Research Methods**

**Course Number: (01101281)**

**(3 CHs)**

- Introduction to scientific research: the concept of scientific research, methods of conducting scientific research, objectives of scientific research, basic characteristics of scientific research, steps and stages of scientific research.
- Research design: types of research, research strategies, and ethics in research.
- Data collection tools and methods: sources of data, data collection tools (questionnaire, interview, observation, projection method).
- Variables and measures: types of variables, types and characteristics of measures, validity and reliability for quantitative and qualitative research.
- Statistical concepts: descriptive statistics, inferential statistics, measures of central tendency, and measures of dispersion.
- Data analysis and hypothesis testing: data coding, data classification, hypothesis testing and correlation.
- Data display: Data display methods.
- Documentation in scientific research: in - text documentation, documentation in the reference list, documentation in the list of sources, methods of documentation.

#### **Course outcomes:**

1. To define terms related to course and deduce the elements of scientific research.
2. To define curriculum concept and compare between the different curricula according to what is determined by the research problem.
3. To distinguish between research methods through their relevance to different research.
4. To organize research by preparing a plan, and work with a group within a team and form successful positive relationships with others.
5. To analyze the relationships between the different research methods.
6. To create new links that can show the variables which occur in the experimental approaches.