

# Ahvaz Jundishapur University of Medical Sciences

**Course Title: Research Methodology**

**Field and Level: Master's in Clinical Biochemistry**

**Faculty: Medicine Course Code: 20 Academic Year: 2025-2026**

**Prerequisite: Credits: 2 Semester: Fall**

**Instructor Group: Drs. Ghasemian, Faridi, Igeder / Hashem Nia**

**Class Day and Time: Wednesday 10-12**

<b>Instructor Name</b>	<b>Teaching Method</b>	<b>Learner Activities</b>	<b>Outline (Concepts to be Taught)</b>	<b>Date</b>	<b>Session</b>
<b>Dr. Ghasemian</b>			<b>How to Choose a Research Topic, Searching Major Databases, Problem Statement, Introduction to Reference Management Software</b>		<b>First</b>
<b>Dr. Ghasemian</b>			<b>Research Areas in Biochemistry</b>		<b>Second</b>
<b>Dr. Ghasemian</b>			<b>Principles of Selecting Materials and Methods</b>		<b>Third</b>
<b>Dr. Ghasemian</b>			<b>Research Objectives, Hypotheses, Questions, and Types of Variables</b>		<b>Fourth</b>
<b>Dr. Ghasemian</b>			<b>Principles of Preparing a Research Proposal</b>		<b>Fifth</b>
<b>Dr. Faridi</b>			<b>Types of Research (Prospective, Retrospective, Case-Control, etc.)</b>		<b>Sixth</b>
<b>Dr. Faridi</b>			<b>Types of Research (Prospective, Retrospective, Case-Control, etc.)</b>		<b>Seventh</b>
<b>Dr. Faridi</b>			<b>Types of Research (Prospective, Retrospective, Case-Control, etc.)</b>		
<b>Dr. Ghasemian</b>			<b>Methods for Determining Sample Size</b>		<b>Eighth</b>
<b>Dr. Ghasemian</b>			<b>Ethical Principles in Research</b>		<b>Ninth</b>
<b>Dr. Igeder</b>			<b>Data Collection Methods</b>		<b>Tenth</b>
<b>Dr. Igeder</b>			<b>Dissemination of Research Results</b>		<b>Eleventh</b>
<b>Dr. Hashem Nia</b>			<b>Introduction to Concepts: Sensitivity, Accuracy, Precision, Interfering Factors, False Positive and False Negative Errors, Bias, Positive and Negative Predictive Value</b>		<b>Twelfth</b>
<b>Dr. Hashem Nia</b>			<b>Types of Animal Study Models</b>		<b>Thirteenth</b>

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<b>Dr. Ghasemian</b>			<b>Principles of Preparing and Formatting Posters, Articles, etc.</b>		<b>Fourteenth</b>
<b>Dr. Ghasemian</b>			<b>Principles of Preparing and Formatting the Final Report</b>		<b>Sixteenth</b>
<b>Dr. Hashem Nia</b>			<b>Types of Animal Study Models</b>		<b>Thirteenth</b>