



INFORMATICS RESEARCH

Exploring, Investigating, and Advancing
Knowledge in Informatics



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COURSE OUTLINE

MEETING

1

Introduction to Informatics Research

MEETING

2

Research Problems and Problem Identification

MEETING

3

Literature Review and Research Gap Analysis

MEETING

4

Research Questions, Objectives, and Contributions

MEETING

5

Research Paradigms and Methodological Approaches

MEETING

6

Informatics Research Design and Methodology

MEETING

7

Research Data Collection and Experimental Design

MEETING

8



Midterm Examination

MEETING

9

Data Processing and Research Analysis

MEETING

10

Research Evaluation and Performance Metrics

MEETING

11

Validity, Reliability, and Reproducibility in Research

MEETING

12

Research Ethics, Academic Integrity, and Responsible Research

MEETING

13

Scientific Writing and Research Documentation

MEETING

14

Research Proposal Development

MEETING

15

Research Presentation and Critical Discussion

MEETING

16



Final Examination



COMPETENCY STAGES

M1–M4

Research Understanding & Problem Formulation

Students understand the fundamentals of Informatics research, identify research problems, analyze research gaps, and formulate research questions, objectives, and contributions.

M5–M7

Research Design & Methodological Planning

Students select appropriate research paradigms and methodologies, design research procedures, and plan data collection and experimental strategies.

M8

Assessment

Students demonstrate their understanding through a Midterm Examination covering research problems, literature gaps, research questions, objectives, and methodological design.

M9–M13

Research Implementation, Evaluation & Integrity

Students apply research methods to process and analyze data, evaluate research performance, ensure validity and reproducibility, and conduct research ethically with academic integrity.

M14–M15

Research Development & Scientific Communication

Students develop an integrated research proposal and communicate their research through scientific presentation, critical discussion, and methodological justification.

M16

Assessment

Students demonstrate integrated research competence through the Final Examination, encompassing problem formulation, literature analysis, research methodology, data analysis, evaluation, and scientific communication.



ASSESSMENT SCHEME



Attendance

Active participation in class activities, discussions, and learning engagement.



Active Participation

Contribution to discussions, questions, and collaboration in class.



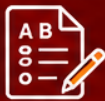
Exercise Assignments

Completion of weekly problem sets and practice exercises.



Presentation Assignments

Group or individual presentations on topics and project progress.



Midterm Examination

Theoretical and problem-solving assessment on the first half of the course.



Final Examination

Comprehensive assessment covering the entire course material.



LEARNING MEDIA



Face-to-Face in Class



Online via Zoom or Google Meet



Learning Videos



<https://ilmu2.upnjatim.ac.id/>



<https://web.whatsapp.com/>



TASK



Class Coordinator Election



Register on ILMU



Update WhatsApp Identity



Join the Class WhatsApp Group



Form a Group

