



**NATIONAL UNIVERSITY OF ENGINEERING
COLLEGE OF GEOLOGICAL, MINING AND METALLURGICAL
ENGINEERING**

METALLURGICAL ENGINEERING PROGRAM

AH101 – STUDY AND RESEARCH METHODOLOGY

I. GENERAL INFORMATION

CODE	: AH101 Study and Research Methodology
SEMESTER	: 1
CREDITS	: 2
HOURS PER WEEK	: 2 (Theory – Practice)
PREREQUISTE	: None
CONDITION	: Compulsory

II. COURSE DESCRIPTION

The course prepares students for developing oral and written communication skills, elaborating clear oral presentation and written reports. Students understand the importance of communication for making other people understand our feelings, emotions and goals. Also, students recognize the importance of team work and leadership for conducting the team to the attainment of goals and objectives.

III. COURSE OUTCOMES

At the end of the course students:

1. Analyze and formulate his/her own personal mission and vision.
2. Understand the scientific method for accruing out research work.
3. Understand and analyze the methods and techniques for clear and comprehensible oral presentations.
4. Prepare well written reports following clear and comprehensible formats and respecting grammar rules.
5. Appraise the importance of team work and leadership.

IV. COURSE CONTENTS

1. ORAL PRESENTATION

Business and personal mission and vision. Goals in life. Oral communications. Transmitter and receiver. The message. Speaker qualities and attributes. Oratory key points. Planning. Exposition. Conclusion. Discussion. Evaluation of oral presentations.

2. WRITTEN REPORT

Orthography and grammar rules. Grammar symbols. Word classification. Ideas organization. Communication units. Main and secondary ideas. Abstract and summary. Information organization. Conceptual maps. Narrative and descriptive texts. Technical report. Technical paper. Research paper.

3. SCIENTIFIC RESEARCH

Research themes. Types of research. Problem definition. Problem formulation. Hypothesis formulation. Questions formulation. Formulation of objectives. Research methodology. Experimental testing. Result analysis. Conclusions. Scientific method.

4. STUDY METHODS AND TECHNIQUES

Study methods. Study instruments. Conceptual maps. Abstracts and summaries. Memory development.

5. EMOTIONAL INTELLIGENCE

Multiple intelligence. Howard Gardner intelligence. Emotional intelligence.

6. TEAM WORK

Importance of team work. Team objectives. Leadership.

VI. METHODOLOGY

The course takes place in theory and practice sessions. In theory sessions, faculty presents the concepts, methods and techniques. In practice session, students practice oral and written communication under faculty supervision. At the end of the semester, students submit and defend a report. Student active participation is promoted.

VII. GRADING SYSTEM

The Final Grade (FG) is calculated with the following formula:

$$\mathbf{FG = (EP + EF + PP) / 3}$$

EP: Mid-term exam

EF: Final exam

PP: Average of quizzes and practice

VIII. BIBLIOGRAPHY

1. HERNANDEZ SAMPIERI, FERNANDEZ COLALDO.
Scientific Research
McGraw Hill Editorial, 2010
2. LUSSIER ROBERT
Leadership
Thompson International Editorial, 2012