NATIONAL UNIVERSITY OF ENGINEERING
COLLEGE OF CIVIL ENGINEERING
CIVIL ENGINEERING PROGRAM

CO722 ENVIRONMENTAL IMPACT EVALUATION

I. GENERAL INFORMATION

CODE	**:** CO722 Environmental Impact Evaluation
SEMESTER	**:** 7
CREDITS	**:** 3
HOURS PER WEEK	**:** 4 (Theory – Practices)
PREREQUISITES	**:** CO621 Construction Technology II CO6222 Geography and National Reality
CONDITION	**:** Mandatory

II. COURSE DESCRIPTION

World policies and trends. Concept of Strategic Environmental Assessment (SEA). Systematic evaluation of the environmental effects of the plans and programs related to the use of the territory. Application in regional and local plans, development, transport and waste. Assessment Phases. Methods for its development. National cases.

III. COURSE OUTCOMES

At the end of the course the student will:

- Develop the evaluation of cumulative and synergistic environmental impacts.
- Plan environmental management instruments for a territory.
- Determine important aspects for the Strategic Environmental Assessment of a Plan or Program.
- Participate in teams to develop assigned tasks.

IV. LEARNING UNITS

1. **REVIEW OF CONCEPTS AND METHODS OF ENVIRONMENTAL ASSESSMENT**
   Definitions and concepts / Baseline / Environmental impacts / Environmental Management Strategy / Citizen participation.

2. **ENVIRONMENTAL MANAGEMENT OF THE TERRITORY**
   Environmental management / Environmental management instruments / Environmental diagnosis / Environmental policy / Environmental action plan /

Environmental agenda / Global and national environmental trends / Environmental sustainability.

3. **STRATEGIC PLANNING**
   Strategic thinking / Strategic plans / Vision / Mission / Strategic objectives

4. **BASIC ASPECTS OF THE STRATEGIC ENVIRONMENTAL ASSESSMENT**
   Policies, Plans, Programs / Concepts of strategic environmental assessment / Characteristics / Differences between SEA and EIA / Legal Framework / SEA Methodology.

5. **STRATEGIC DIAGNOSIS**
   Relevant social and environmental aspects / Sub-themes / Attributes / Trend analysis / Citizen participation in SEA

6. **CHARACTERIZATION OF POSSIBLE ENVIRONMENTAL IMPLICATIONS**
   Analysis of Programs and Projects / Analysis of cumulative effects / Impact indicators

7. **MEASURES TO REDUCE SIGNIFICANT NEGATIVE IMPLICATIONS**
   Socio-Environmental Management Programs / Implementation of monitoring and evaluation

8. **STRATEGIC ENVIRONMENTAL EVALUATION IN PERU: CASE - LORETO**
   Stages followed / Methodological process / Results.

V. LABORATORIES AND PRACTICAL EXPERIENCES

- Qualified Practice 1: Environmental assessment
- Qualified Practice 2: Environmental management of the territory
- Qualified Practice 3: Concepts about strategic environmental assessment
- Qualified Practice 4: Application of strategic environmental assessment

VI. METHODOLOGY

The course is developed in theory and practice sessions. In theory sessions, the professor presents the concepts, definitions, theories. In the practical sessions, previous experiences are reviewed, several cases are solved and their respective solution is analyzed; the students make expositions on the different topics of the course. In all the sessions, the active participation of the student is promoted.

VII. EVALUATION FORMULA

The learning will be evaluated through the "G" system.

- Partial Exam: Weight 1
- Final Exam: Weight 1
- Practices Average: Weight 1.

Calculation of the Final Average:

$$FA = \frac{PE + FE + PA}{3}$$

PE: Partial Exam; FE: Final Exam, PA: Practices Average

For the Practices Average the three practices with the highest grades:

$$PA = \frac{QP1 + QP2 + Q3}{3}$$

VIII. BIBLIOGRAPHY

1. Environmental and Natural Resources Legislation
   Government Ministry of Environment
   Lima, Peru, 2016

2. Best Practices for Environment Protection and Conservation
   Mary Rosas
   National Environmental Commission CONAM
   Lima, Peru, 2014
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