Environment Impact Assessment:

(Course Code: EVS308)

**Spring semester, 2020-2021**

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| Coordinator | Sangay Tshering |
| Credits | 6 ECTS (Compulsory course), 60 in-class hours |
| Lecturers | Sangay Tshering (Environment and Climate Studies, College of Natural Resources, Royal University of Bhutan) |
| Level | BSc |
| Host institution | Department of Environment and Climate Studies, College of Natural Resources, Royal University of Bhutan |
| Course duration | March 01 – June 10, 2019 |

### Summary

*This 6 ECTS course covers the foundations, process and components of Environmental Impact Assessments to be carried prior to the implementation of developmental projects. This course covers the theory in the class and the actual process is carried in the field as a class project. During the process of carrying out the EIA exposure to students will also be given with regard to knowledge, skills and tools. The main focus is to inculcate among the students on how and when the informed decisions can be made, thus, this course allow students to explore and interpret whether there is any feasibility to implement the specific developmental project.*

### Target student audiences

3rd year BSc students.

### Prerequisites

None

### Aims and objectives

The module is designed to enable students to apply Environmental Assessment (EIA) procedures and implement management tools in local and regional development procedures. The main aim of this module is to equip students with knowledge required to understand the basic concepts of impacts on the environment and impact assessment procedures. It also provides practical experiences in using environmental tools to analyze complex environmental problems.

### General learning outcomes:

On completion of the module, learners will be able to:

* Analyze and discuss current and future trends in the use of EIA.
* Simulated aspects of environmental assessment and gain better understanding of the processes under consideration
* Evaluate and appraise issues relating EIA
* Execute planning, implementation, monitoring, auditing, reviewing and reporting of environmental management systems.
* Investigate local and global environmental issues and explore the relevance of these issues in the local context.
* Interpret options for evaluating environmental and social impacts
* Develop tools for EIA.

### Overview of sessions and teaching methods

This Module is delivered avoiding teacher centered methods. Teaching-learning takes place in two ways where students are encouraged to participate in class presentation through analysis of case studies and field data collected from the environmentally disturbed areas. Students in groups also prepare a report and poster related to one of these topics: life cycle assessment, risk assessment, conflict analysis and cost benefit analysis.

### Course workload

The table below summarizes course workload distribution:

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| --- | --- | --- | --- |
| **Activities** | **Learning outcomes** | **Assessment** | **Estimated workload (hours)** |
| **In-class activities** |
| Lectures  | Understanding theories and concepts such as on soundness of investment through cost-benefit analysis, and also the methodology and tools for environmental risk assessment | Class participation | 30 |
| Practical | Applying environmental tools in evaluating environmental and social impacts and then writing field report after field visit to one of the environmental disturbed areas.  | Field report and class participation. | 30 |
| Tutorials | Understanding Environmental Assessment (EIA) procedures and implementation of management tools | Group as well as individual discussion | 15 |
| In-class assignments | Understanding key elements of the EIA process and nature and scope of environment issues and impacts | Class participation and preparedness for assignments | 15 |
| **Independent work** |  | **Class**  |  |
| Group work:* Preparation of field report and delivery of individual presentation
* Contribution to the case-study report
 | Ability to prepare a report and poster related to one of these topics: life cycle assessment, risk assessment, conflict analysis and cost benefit analysis. | Quality of group assignments and individual presentations | 30 |
| ***Total*** |  |  | ***120*** |

### Grading

The students’ performance will be based on the following:

The practical report will be assessed based on the following criteria:

3% Use of theory

5% Application of tools

5% Level of analysis

2% Referencing

 The poster of A3 size will be assessed by the judges, based on the following criteria:

5% Illustration

5% Layout

3% Color combination

3% Ability to answer questions

4% Visual appeal

### Course schedule

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| --- | --- | --- | --- |
| **Day** | **Time** | **Topic** | **Lecturer** |
| March Monday 25.  | 9-12:15 | - Purpose, objectives, learning outcomes, assignment and grading- Background of environmental impact assessment –-Definition and categories of environmental impact assessment- History of the origin and development of environmental impact assessment | Sangay Tshering |
| March Tuesday 26 | 10:15-12:15 | -Major trends in EIA-EIA and EIS | Sangay Tshering |
| March Thursday 27  | 08:00-10:00 | - The baseline situation- EIA as a tool in moving towards sustainability | Sangay Tshering |
| March, Friday, 28.  | 10:15-12:15 | -EIA importance- Types of impacts & their attributes | Sangay Tshering |
| April 1 Monday | 9-12:15 | - Environmental issues and impacts- Guiding principles of EIA | Sangay Tshering |
| April 2 Tuesday | 10:15-12:15 | -Key operating principles of good EIA practice-Three core values on which the EIA process | Sangay Tshering |
| April 5 Friday | 08:00-10:00 | - Key players in EIA process- Cost and benefit of EIA | Sangay Tshering |
| April 9 Tuesday | 10:15-12:15 | -Costs and benefits of using an EIA process- Public involvement in EIA- Objectives and scope of Public Involvement | Sangay Tshering |
| April 11 Thursday | 9-12:15 | - EIA Report Review- Monitoring- Public Involvement Techniques in EIA | Sangay Tshering |
| April 15 Monday | 10:15-12:15 | -Public participation-Public Involvement Techniques in EIA | Sangay Tshering |
| April 16 Tuesday | 08:00-10:00 | - levels and forms of public involvement techniques- Factor affecting public participation | Sangay Tshering |
| April 19 Friday | 10:15-12:15 | -Principle of public involvement- Public consultation/involvement steps in Bhutan | Sangay Tshering |
| April 24 Wednesday | 9-12:15 | - Stakeholder involvement in EIA- Benefits of stakeholder involvement | Sangay Tshering |
| April 26 Friday | 10:15-12:15 | -Constraints in stakeholder involvement-Importance of stakeholder involvement | Sangay Tshering |
| April 30 Tuesday | 08:00-10:00 | - EIA process- EIA flow chart | Sangay Tshering |
| May 6 Monday | 10:15-12:15 | -Screening in EIA- Objectives of Screening | Sangay Tshering |
| May 8 Wednesday | 9-12:15 | - Variety of proposed activities can be subjected to EIA- Four approaches are used in the selection of activities to be submitted to EIA | Sangay Tshering |
| May 10 Friday | 10:15-12:15 | -Responsible for screening-Screening importance | Sangay Tshering |
| May 21 Tuesday | 08:00-10:00 | - Scoping- Scoping process | Sangay Tshering |
| May 16 Thursday | 10:15-12:15 | -Components of a project scope- Stakeholder and public involvement in scoping | Sangay Tshering |
| May 17 Friday | 9-12:15 | - Impact analysis- Ecological aspects- Socio-economic aspects | Sangay Tshering |
| May 22 Monday | 10:15-12:15 | -Impact analysis procedures-Quantitative methods | Sangay Tshering |
| May 24 Friday | 08:00-10:00 | - Map Overlays in EIA- Importance of Checklists in EIA-Principles and procedures of EIA. | Sangay Tshering |
| May 27 Monday | 10:15-12:15 | -Matrices- Key Issues for Management of Environmental and Social Impacts in Bhutan-Enforcement, auditing and monitoring.  | Sangay Tshering |
| May 30 Thursday | 9-12:15 | - Mitigation measures in EIA - Impact management strategies -Implementation and Monitoring-Evaluation of Plan- Environmental Management Plan | Sangay Tshering |
| May 31 Friday | 10:15-12:15 | -Appeals and dispute resolution- Compliant redressal | Sangay Tshering |

### Course assignments

Assignments will constitute:

Assignment # 1: Practical report on Risk assessment from one of the environmentally desturbed areas.

Assignment #2: The poster presentation of A3 size and also case study report on conflict analysis and cost benefit analysis.

### Literature

Fischer, T.B. (2007). Theory and Practice of Strategic Environmental Assessment: towards a more systematic approach. Earthscan.

Glasson, J., Therivel, R. and Chadwick, A. (2005). Introduction to Environmental Impact Assessment. UCL Press.

Therivel, R. (2004) Strategic Environmental Assessment in Action. Earthscan.

Morris, P. & Therivel, R. (Eds.) (2001) Methods of Environmental Impact Assessment. UCL Press, London.

Weston, J. (Ed.) (2000). Planning & Environmental Impact Assessment in Practice. Longman, London.

Wood, C. (2003). Environmental Impact Assessment: A comparative Review. Prentice Hall, London.