

SEDV 631: LIFE CYCLE ASSESSMENT

The course is about the concept of life cycle assessment (LCA) as it applies to energy production and consumption from an environmental sustainability perspective; Use of LCA to support informed decision-making for improved environmental performance of energy systems avoiding problem-shifting and sub-optimization.

Instructor:

TBD

Course Objective:

The Life Cycle Assessment course focuses on the concept of life cycle assessment (LCA) and its applications. Participants are introduced to the structure of life cycle assessment, including goal and scope definition, inventory analysis, impact assessment, and interpretation. Relevant literature included in a reading list are reviewed and summarized by students. The relative merits of alternative methods for interpreting and valuing impacts also are considered. These concepts are demonstrated and applied through examples in class and group project work where participants apply the methods and tools learned in the class to a project within the energy sector. The course will prepare participants to apply and critically evaluate life cycle assessment concepts and methods to the analysis and design of different aspects of energy development.

Topics Covered (Selected):

- Goal and Scope Definition of LCA
- Inventory Analysis, Impact Assessment and Interpretation
- Data Quality Aspects
- Environmental Product Declarations