

# Life Cycle Assessment

University of Cape Town, Department of Chemical Engineering

24 – 26 July 2017

3 CPD points

## Objectives

To familiarise the student with the environmental assessment tool known as Life Cycle Assessment, some of its diverse uses, the ISO norms, the science behind some of its key impact categories (beyond carbon and water), its use to support decision-making in product systems, process systems or in policy-making. Further to allow the student to develop skills and insights in the important steps of goal and scope definition, inventory modelling, data quality assessment, choice of impact assessment categories, interpretation and uncertainty propagation, partly by working with LCA software and databases.

## Course Content

### Topics

- LCA history and uses
- The ISO norms
- Goal and scope definition
- Inventory modelling, data quality assessment
- The science behind some key impact categories
- Carbon footprints
- Water footprints
- LCA to support decision-making in product systems, process systems or in policy-making
- Interpretation and uncertainty propagation
- LCA software and databases

## Learning Outcomes

Students successfully completing this course will be able to demonstrate the following:

### Knowledge (Information plus Understanding)

- Explain functional units used in specific LCAs.
- Discuss the relevance of impact categories to particular LCAs and select the appropriate impact assessment models
- Interpret LCA results, paying appropriate care to uncertainty.
- Discuss the usefulness of life cycle thinking, single-impact (e.g. carbon footprint) vs multi-impact approaches in different decision-making contexts.

### Skills (Application of Knowledge)

- Define the goal and describe the scope for a comparative product LCA.
- Model the foreground system on a spreadsheet and transfer this to an LCA software package to couple with well-selected background processes into a working system model.
- Choose relevant LCIA categories and report on the modelling outcomes.
- Interpret the LCA results.

### Values and Attitudes

- Value quantitative full-system evidence in environmental decision-making
- Question environmental myths

## Course Lecturers

Dr Philippa Notten, an experienced LCA practitioner and Adjunct Associate Professor at UCT  
Professor Harro von Blottnitz (Pr.Eng.) of the Chemical Engineering Department

Mrs Ilhaam Patel, an experienced LCA practitioner

Dr Valentina Russo, a post-doctoral researcher in the Chemical Engineering Department

#### Course Information

##### *Who should attend?*

Environmental and sustainability assessment practitioners and scientists; life cycle designers, managers and engineers.

##### *Format*

This CPD course forms part of the 4<sup>th</sup> year level course in Life Cycle Assessment offered by the Department of Chemical Engineering. The CPD course is a 3-day certificated course from which a participant can obtain CPD points.

##### *Cost*

The fee for the course will be R6000. This fee includes lecture notes and readings which will be available electronically for download on a Vula site before the lectures commence. Details will be sent to participants.

Discounts for staff and students of UCT, and students of other tertiary education institutes are available under certain circumstances.

Payment details are on the application form.

##### *Certificates and CPD Points*

A certificate of attendance will be awarded to CPD participants for this course. Participants need to attend 80% of the lectures to qualify for an attendance certificate.

According to guidelines set out by the Engineering Council of South Africa, attendance of this course will earn participants 3 points towards Category 1 (Developmental Activities). The ECSA course code is UCTLCA17.

Please note: Credit cannot be claimed for attending this course as a CPD participant.

##### *Venue*

TBC, Snape Building, Upper Campus, UCT

##### *Date and Time*

08h30 – 17h00, Monday 24 – Wednesday 26 July 2017

##### *Applications and cancellations*

In order to ensure a place on the course applicants should complete and return a registration form to the course administrators. The registration form is available at:

<http://www.cpd.uct.ac.za/cpd/applications>

Confirmation will be sent on receipt of an application form

[Applications close on 15 July 2017](#)

**Cancellations must be received one week before the start of the course, or the full fee will be charged.**

For further enquiries, please contact:

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CPD Programme

University of Cape Town

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