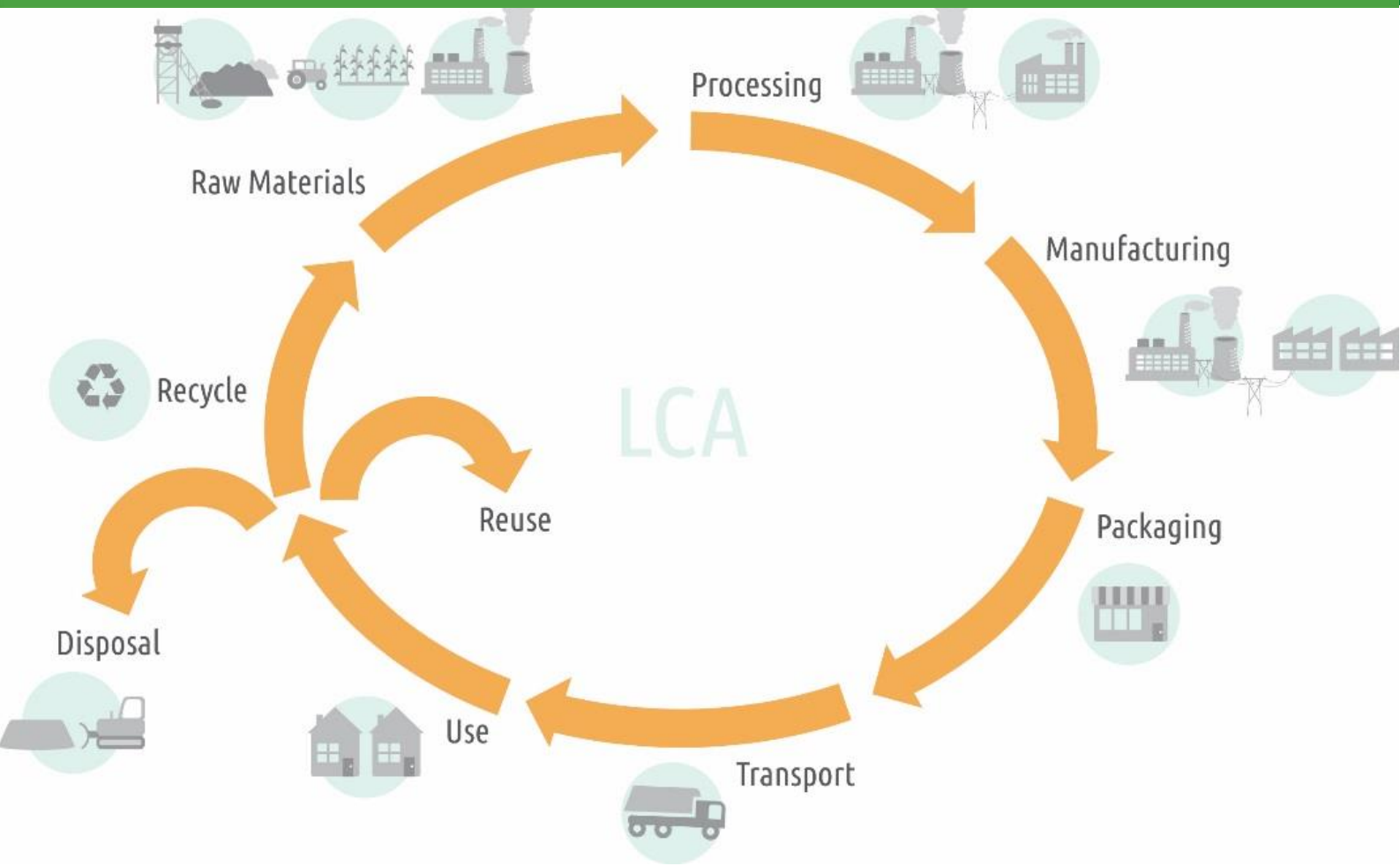
FACULTY OF
ENGINEERING &
THE BUILT ENVIRONMENT

CPD
CONTINUING PROFESSIONAL DEVELOPMENT



CPD Course | Dept. of Chemical Engineering

Life Cycle Assessment

Presented online and in person: 19 - 21 June 2023

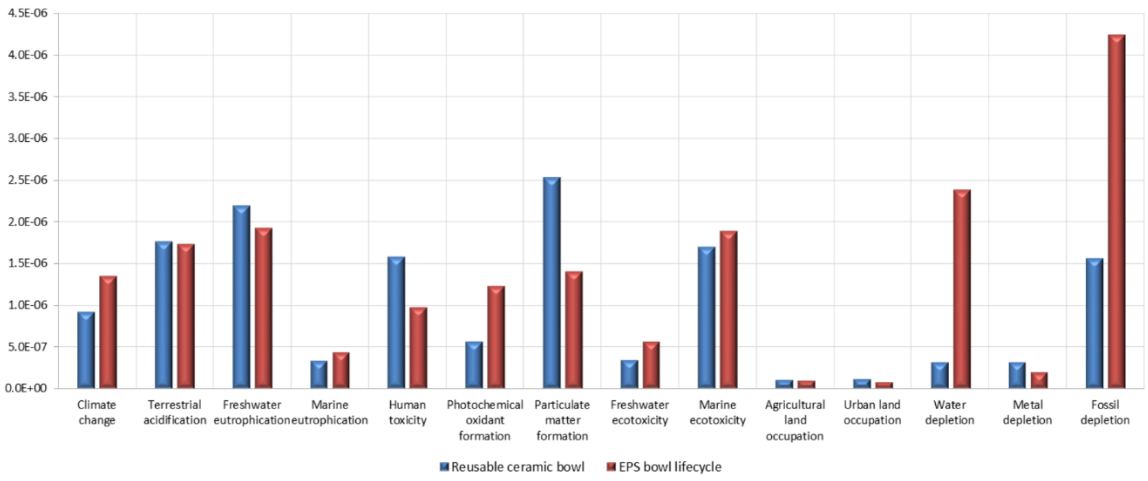
UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

Course 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 policymaking. 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.

Who Should Attend?

Environmental and sustainability assessment practitioners and scientists; life cycle designers, managers and engineers.
Please note that a prerequisite for attendance is 3 years of undergrad studies in natural sciences or engineering.



Course Content

Course 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

Course outcomes

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 Presenters

Dr Philippa Notten, a principal consultant at The Green House, has an undergraduate and PhD degree in Chemical Engineering from the University of Cape Town. Pippa is also an Adjunct Associate Professor at the University of Cape Town in the Department of Chemical Engineering. She is an expert LCA practitioner with over 15 years of experience, primarily relating to life cycle assessment (LCA) in the food, retail, and consumer good sectors, and in the primary industries. Her research work has centred on developing LCA methodology, notably the development of a rigorous approach to the quantification of uncertainty in the information needed to support LCA, and the development of life cycle impact assessment indicators relevant to South Africa (water and biodiversity).

Philippa is a skilled trainer with experience in providing graduate-level courses at universities, summer schools, workshops and conferences. Pippa also coordinates and provides training on LCA and SimaPro software to individual clients and small groups.

Prof Harro von Blottnitz is professor in the Faculty of Engineering and the Built Environment at the University of Cape Town (UCT) and is registered as a professional engineer with the Engineering Council of South Africa. He defines his research and teaching interests by the multiple challenges of sustainable development in developing country settings. He holds a BSc in Chemical Engineering from UCT, a BSc Honours in Operations Research from UNISA, an MSc in Engineering from UCT and a Doctorate in Engineering from the RWTH Aachen in Germany. Specific research interests include Life Cycle Assessment, renewable energy (biogas, biodiesel and bio-ethanol) and waste management. Many of his graduates have gone on to practise as knowledge providers in the emerging green economy

Course Overview

Name	Life Cycle Assessment
Duration	19 – 21June. Two daily sessions (8:30 – 12:30; 14:00 – 17:00). Presented in hybrid format i.e. can be attended in person or online.
Venue	TBC, upper campus, UCT
CPD Points	3 CPD points, ECSA Validation No: UCTLCA23
Participants	Environmental and sustainability assessment practitioners and scientists; life cycle designers, managers and engineers
Other	For technical enquiries, contact: harro.vonblottnitz@uct.ac.za
Format	This CPD course is equivalent to part of the 4th year level course in Life Cycle Assessment offered by the Department of Chemical Engineering. The CPD course is a 3-day certificated course.
Fees	**R12 000.00**. Discounts for staff and students of UCT are available. The course fee includes lecture slides and readings. The latter will be available electronically for download on a Vula site before the lectures commence. Details will be sent to participants. A 10% discount will apply to those participants attending the course online.

***** VAT is not applicable. Payment details are on the application form.

Registration

Registration and Cancellation

- Register for this course
- Registration covers attendance of all sessions of the course, and course material.
- Registrations close one week before the start of the course. Confirmation of acceptance will be sent on receipt of a registration form.
- Cancellations must be received one week before the start of a course, or the full course fee will be charged.
- For more information on application and registration procedures, please visit our website: www.cpd.uct.ac.za

Certificates and CPD Points

A certificate of attendance will be awarded to CPD participants who attend at least 80% of the lectures. Please note: If you are interested in attending this course for credit purposes, you will need to register for the Honours Programme or as an Occasional Student. If you attend the course as a CPD participant, academic credit cannot be claimed in retrospect.
CPD participants can also request a formal university transcript, which will show this course as part of a Professional Development Career.
The course 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.

Contact details

For more information or details on CPD courses, visit our website or contact us.

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