

Chemical Engineering Curriculum: Days of Future Past

**Chemical Engineering Education Innovation Centre, The University of Manchester,
Manchester**

Date: Thursday 17th July 2025, 10am

Location: GA.056, [Nancy Rothwell Building](#), The University of Manchester

Overview

This one-day workshop aims to explore the future of chemical engineering education in higher education (HE). With rapid advancements in technology, evolving industry demands, and increasing emphasis on sustainability and digitalization, it is crucial to rethink how chemical engineering programs are designed. However, we must not forget the fundamental aspects required in the curriculum to produce professional chemical engineers. This workshop will bring together HE academics and industry professionals to help shape the next generation of chemical engineers.

This one day event will be followed by a number of international webinars and discussions to allow engagement with none UK members on these themes.

Objectives

- Examine key challenges and emerging trends in chemical engineering education.
- Discuss core competencies required for future chemical engineers.
- Explore the contents of the curriculum based on essential topics and modern educational principles, while fulfilling IChemE accreditation requirements

Target Audience

- University faculty members teaching chemical engineering.
- Industry professionals with insights into workforce needs.

Proposed Schedule

Time	Activity
10:00-10:20	Arrival and refreshments
10:20-10:30	Welcome and Introduction
10:30-11:30	<p>Dr Daniel Belton, University of Huddersfield <i>“Breadth without compromising depth: reflections on balancing fundamentals and specialist subjects in Chemical Engineering education”</i></p> <p>John Turner, University of Nottingham <i>“Co-creation of curriculum – expanding the partnership, staff-student-alumni.”</i></p> <p>Oliver Horton, The University of Manchester Industrial Placement Student <i>“Student Perspective of Curriculum Topics”</i></p>
11:30-11:45	Break
11:45-12:45	<p>Prof Chris Rielly, IChemE Education Subcommittee Chair/Loughborough University <i>“Designing the curriculum to meet IChemE accreditation requirements”</i></p> <p>Wadoud Hazineh, CEng FIChemE <i>“Industrial Insights on BEng Chemical Engineering Modules”</i></p>
12:45-13:30	Lunch
13:30-15:00	<p>Workshop session: Designing a future curriculum</p> <p>Group activity to discuss curriculum contents and to examine the constraints of the BEng programme.</p> <p>Rodgers, Thomas; Luberti, Mauro; Malekshahian, Maryam (2025). Curriculum Development Activity. National Teaching Repository. Educational resource. https://doi.org/10.25416/NTR.29185178.v1</p>
15:00-15:15	Break
15:15-15:45	Group Feedback and Discussion
15:45-16:00	Closing Remarks

Output

It is hoped that a key output of the workshop will be a piece on future chemical engineering curriculums with identification of key topics to be included and inclusion strategies, which will help provide guidance via the IChemE.