

LANG4035 Technical Communication 2 for Chemical and Biological Engineering (CBE) students: Course Description and syllabus

LANG 4035 is a three-credit course offered to students in the Department of Chemical and Biological Engineering (CBE). Topics and materials used in the course will be drawn from fields relevant to Chemical Engineering (CENG), Chemical and Environmental Engineering (CEEV), Bioengineering (BIEN) and Sustainable Energy Engineering (SUSEE). Over one semester, students will attend three hours of class and will be expected to complete up to six hours of out-of-class work, per week. The course focuses on two main areas:

Communication in professional contexts

Students will investigate a topical issue in CBE. This will involve reading and viewing a variety of information sources related to the issue and summarizing and synthesizing material from these texts to critically analyze the impact and potential of this development. Students will also analyze the audience and communicative purpose of professional texts found in engineering and explore how such texts are organized and written to achieve their purposes. They will use appropriate language and organizational strategies to write a white paper and do a short presentation.

Communication in CBE projects

Students will develop effective organizational strategies and enhance their ability to use appropriate language to write an academic report in CBE, in the context of their Final Year Project work. Course materials will focus on introducing the project, setting it in context (Literature Review), describing methods and evaluating results. Students will also learn how to write an Abstract, thank those who have helped them (Acknowledgements) and will consider the use of an appropriate citation style. They will also learn how to present information coherently and for maximum impact on the audience in a poster presentation on their progress in the FYP.

Pre-requisites for LANG4035

LANG2030 (H)

(for DDP only) LANG1003/LANG1403/LANG1404

Intended Learning Outcomes

HKUST Competency	CLE Core Areas for Learning and LANG4035 ILOs
Problem-solving (PS03)	Synthesis <ol style="list-style-type: none"> 1. You can critically analyze and discuss major issues and recent developments in your major and related professions. 2. You can select relevant and appropriate information from texts in your major subject and from related professional sources, including non-written data, e.g. graphs, equations, images. 3. You can summarize and synthesize this information appropriately, avoiding copying. 4. You can support claims with appropriate evidence, and properly acknowledge sources.
Communication (CM01-4)	Substance <ol style="list-style-type: none"> 5. You can speak and write clearly and fully, using relevant information, ideas and arguments. Coherence <ol style="list-style-type: none"> 6. You can write and speak coherently using appropriate organizational structures and formatting for engineering-related communication tasks. 7. You can recognize appropriate organizational structure, tone and formatting in written and spoken communication in your major subject and in related professional sources. Language accuracy and use (written and spoken) <ol style="list-style-type: none"> 8. You can use accurate and fluent language (pronunciation, intonation, vocabulary, linguistic structures and style) relevant to engineering-related communication tasks Interaction <ol style="list-style-type: none"> 9. You can use appropriate language to address the needs and concerns of a variety of academic and professional audiences in speaking and writing. Mode of Communication <ol style="list-style-type: none"> 10. You can use appropriate body language in engineering-related presentations. 11. You can use a variety of modes of communication effectively (such as project posters)

Personal Development (SR02)	<p>Being an effective learner</p> <p>12. You can show awareness of own learning needs and how they fit into the wider self, academic and professional development.</p> <p>13. You can identify strengths and weaknesses in the work of others.</p> <p>14. You can give constructive feedback to improve the performance of others in engineering-related communication tasks.</p>
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Assessment

<p>White Paper</p> <p><i>Relevant ILOs: 1, 2, 3, 5, 6, 7, 8, 9, 12</i></p>	25%
<p>A presentation on an industry trend and future developments</p> <p><i>Relevant ILOs: 1, 2, 3, 5, 6, 7, 9, 10, 11, 12</i></p>	25%
<p>Introduction and Literature Review to a CBE project report</p> <p><i>Relevant ILOs: 1, 2, 3, 4, 5, 6, 7, 8, 9</i></p>	25%
<p>Poster presentation + Peer feedback</p>	25%
<p>A poster presentation (20%)</p> <p><i>Relevant ILOs: 1, 2, 3, 5, 6, 7, 8, 9, 10, 11</i></p>	
<p>Peer review of presentation (5%)</p> <p><i>Relevant ILOs: 13, 14</i></p>	

Course Content

<u>Communication in CBE projects</u>	<u>Communication in professional contexts</u>
<ul style="list-style-type: none"> • Introducing a CBE project • Presenting an Overview • Reviewing the Work of Others • Analyzing the Market • Describing Experimental Procedures • Describing a Process • Presenting Results and Discussing Implications • Drawing Conclusions and Talking about the Future • Designing a Poster • Poster Presentations 	<ul style="list-style-type: none"> • Talking about Trends • Reaching out to Potential Customers • Strategies for White Papers • White Papers and Problem Solving • White Papers and Opportunities • Pointing the Way Forward in White Papers • Preparing a Presentation • Presentation Skills