The Hong Kong University of Science and Technology
UG Course Syllabus

Technical Communication 2 for Chemical and Biological Engineering
LANG4035
3 credits
Pre-requisites: LANG2030 or LANG2030(H)

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Office Hours of Course coordinator: Available by appointment only. Students should contact their section instructor directly with any questions.

Course Description

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 CBE projects
  Students will develop effective organizational strategies and enhance their ability to use appropriate language to write an academic report in CBE and deliver an academic presentation, in the context of their Final Year Project work. Students will read and discuss materials on CBE-related topics from academic journal articles and conference papers. They will write an introduction and a literature review for their FYP. 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.
- 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 deliver a short presentation.

Intended learning outcomes (ILOs)
By the end of this course, students should be able to:

1. critically analyze and discuss major issues and recent developments in your major and related professions.
2. 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. summarize and synthesize this information appropriately, avoiding copying.
4. support claims with appropriate evidence, and properly acknowledge sources.
5. speak and write clearly and fully, using relevant information, ideas and arguments.
6. write and speak coherently using appropriate organizational structures and formatting for engineering-related communication tasks.
7. recognize appropriate organizational structure, tone and formatting in written and spoken communication in your major subject and in related professional sources
8. use accurate and fluent language (pronunciation, intonation, vocabulary, linguistic structures and style) relevant to engineering-related communication tasks.
9. use appropriate language to address the needs and concerns of a variety of academic and professional audiences in speaking and writing.
10. use appropriate body language in engineering-related presentations.
11. use a variety of modes of communication effectively.
12. show awareness of own learning needs and how they fit into the wider self, academic and professional development.
13. identify strengths and weaknesses in the work of others
14. give constructive feedback to improve the performance of others in engineering-related communication tasks.

Assessment and Grading
This course will be assessed using criterion-referencing and grades will not be assigned using a curve. Detailed rubrics for each assignment are provided on Canvas.

Assessment Task	**Contribution to Overall Course grade (%)**	**Due date**
White Paper	25%	Approx. week 6*
A Presentation on an Industry Trend and Future Developments	25%	Approx. week 6*
Introduction and Literature Review to a CBE project report	25%	Approx. week 10*
Poster Presentation + Peer Feedback	25%	Approx. week 13*

* Specific due dates are posted on Canvas. Assessment marks for individual assessed tasks will be released within two weeks of the due date.

Mapping of Course ILOs to Assessment Tasks

Assessed Task	Mapped ILOs	Explanation
Introduction and Literature Review to a CBE project report	1, 2, 3, 4, 5, 6, 7, 8, 9	This task assesses students' ability to critically analyze and discuss key issues in their field (ILO 1), select and synthesize relevant information from various sources (ILOs 2 and 3), support claims with evidence and proper citations (ILO 4), and communicate clearly, coherently, and fluently in a structured, audience-appropriate manner (ILOs 5, 6, 7, 8, and 9).
Poster Presentation + Peer Feedback	1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 13, 14	This task assesses students' ability to critically analyze and discuss key issues in their field (ILO 1), select and synthesize relevant information (ILOs 2 and 3), communicate ideas clearly and coherently using structured, audience-appropriate, and fluent language (ILOs 5, 6, 7, 8, and 9), deliver effective presentations with proper body language and multimodal communication (ILOs 10 and 11), and evaluate peers' work by identifying strengths and weaknesses and providing constructive feedback (ILOs 13 and 14).
White Paper	1, 2, 3, 5, 6, 7, 8, 9, 12	This task assesses students' ability to critically analyze and discuss key issues in their field (ILO 1), select and synthesize relevant information from various sources (ILOs 2 and 3), and communicate ideas clearly, coherently, and fluently in a structured, audience-appropriate manner (ILOs 5, 6, 7, 8, and 9), while demonstrating awareness of their own learning needs and how these contribute to their professional development (ILO 12).
A Presentation on an Industry Trend and Future Developments	1, 2, 3, 5, 6, 7, 9, 10, 11, 12	This task assesses students' ability to critically analyze and discuss key issues in their field (ILO 1), select and synthesize relevant information from various sources (ILOs 2 and 3), and communicate ideas clearly and coherently in a structured, audience-appropriate manner (ILOs 5, 6, 7, and 9), while delivering an effective presentation using proper body language and multimodal communication (ILOs 10 and 11) and demonstrating awareness of their own learning needs and professional development (ILO 12).

Grading Rubrics

Detailed rubrics for each assignment are provided on Canvas. These rubrics clearly outline the criteria used for evaluation. Students can refer to these rubrics to understand how their work will be assessed.

Final Grade Descriptors:

Grades	Short Description	Elaboration on subject grading description
A	Excellent Performance	Demonstrates a comprehensive grasp of subject matter, expertise in problem-solving, and significant creativity in thinking. Exhibits a high capacity for scholarship and collaboration, going beyond core requirements to achieve learning goals.
B	Good Performance	Shows good knowledge and understanding of the main subject matter, competence in problem-solving, and the ability to analyze and evaluate issues. Displays high motivation to learn and the ability to work effectively with others.
C	Satisfactory Performance	Possesses adequate knowledge of core subject matter, competence in dealing with familiar problems, and some capacity for analysis and critical thinking. Shows persistence and effort to achieve broadly defined learning goals.
D	Marginal Pass	Has threshold knowledge of core subject matter, potential to achieve key professional skills, and the ability to make basic judgments. Benefits from the course and has the potential to develop in the discipline.
F	Fail	Demonstrates insufficient understanding of the subject matter and lacks the necessary problem-solving skills. Shows limited ability to think critically or analytically and exhibits minimal effort towards achieving learning goals. Does not meet the threshold requirements for professional practice or development in the discipline.

Course AI Policy

We encourage students to make use of all the tools available that can help them to communicate more effectively in English. We also expect students to uphold the highest standards of academic integrity. There is no penalty for using or not using GenAI. However, GenAI and other tools cannot be used as a substitute for a student's own work. Students are expected to write their own assessed assignments and to prepare their presentations themselves.

GenAI tools can be very useful for:

- Brainstorming ideas and suggesting sources BUT the information provided may not be accurate or relevant to your assignment.
- Giving suggestions about improving the organization of your writing BUT GenAI tends to suggest very formulaic patterns of writing which may not fit your requirements.
- Giving suggestions about improving your language BUT GenAI may make suggestions for language changes which are not appropriate for the intended context and audience.
- Suggesting simple ways of expressing complex discipline-specific concepts BUT these explanations may be unfamiliar to your audience.
- Providing summaries of long texts BUT important information may be omitted, particularly if the original text is not well-written.

In short, GenAI provides opportunities to enhance your use of English and contains pitfalls which you need to be aware of.

Communication and Feedback
Assessment marks for individual assessed tasks will be communicated via Canvas within ten working days of submission. Feedback on assignments will include strengths and areas for improvement where relevant. Students who have further questions about the feedback including marks should consult the instructor within five working days after the feedback is received.

Resubmission Policy
Resubmissions are not accepted, except in exceptional circumstances.

Required Texts and Materials
Course materials and additional resources are provided via Canvas.

Academic Integrity
Students are expected to adhere to the university's academic integrity policy. Students are expected to uphold HKUST's Academic Honor Code and to maintain the highest standards of academic integrity. The University has zero tolerance of academic misconduct. Please refer to Academic Integrity | HKUST - Academic Registry for the University's definition of plagiarism and ways to avoid cheating and plagiarism.