

The Hong Kong Polytechnic University

Subject Description Form

Subject Code	ABCT5T01
Subject Title	Academic Integrity and Ethics in Science
Credit Value	1
Level	5
Pre-requisite/ Co-requisite/ Exclusion	None
Objectives	<ol style="list-style-type: none">1. Raise students' awareness of the importance of adhering high standards of academic integrity.2. Enhance students' ability to critically analyse ethical issues and make appropriate ethical decisions.3. Equip students in science with a deep understanding and respect of academic integrity and ethics that they can apply in their scientific research and use of generative artificial intelligence (AI) at PolyU as well as in their future professional endeavours.
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none">a. Demonstrate knowledge and understanding of the concepts and principles of academic integrity and ethics.b. Demonstrate awareness and ability to analyse academic integrity and ethical issues, such as copyright and plagiarism, and act properly to avoid academic and ethical misbehaviours.c. Recognise important ethical issues and practices in a university context.d. Understand the implications and concerns on academic integrity raised by the latest technology, such as ChatGPT and other Generative Artificial Intelligence (GenAI) tools.e. Identify and deal with complex ethical and professional issues in discipline-specific settings, and be able to communicate effectively the issues to the stakeholders and the public.f. Develop a consciousness of prevailing ethical issues and dilemmas in relation to their specific scientific research area and generative AI.g. Critically analyse and debate scenarios of potential or actual ethical misconduct within the scope of their scientific discipline and generative AI.h. Discuss the extension and application of research ethics principles to professional and personal codes of conduct in the context of scientific integrity and societal wellbeing.

	discipline-related scenario/case analysis										
	2. Group presentation (Video)	50%	√	√	√	√	√	√	√	√	√
	Total	100 %									
	<p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <p>1. Each student will be required to submit an assignment on discipline-related scenario/case analysis, which will assess the student's ability to identify and analyze ethical issues in related fields and figure out how these could be avoided or resolved.</p> <p>2. Students will be grouped to create a video to present on selected topics, which will assess their ability to present and argue points in support of their rationale.</p> <p>The subject will be assessed on a Pass/Fail grading mechanism.</p>										
Student Study Effort Expected	Class contact:										
	▪ Lecture/seminar/workshop/presentation										13 Hrs.
	Other student study effort:										
	▪ Self study and group work										13 Hrs.
	▪ Assignment preparation										13 Hrs.
	Total student study effort										39 Hrs.
Reading List and References	<ul style="list-style-type: none"> • Saxena, A., (2019). <i>Ethics in Science: Pedagogic Issues and Concerns</i>. Springer. • Rollin, B. E., (2006). <i>Science and ethics</i>. Cambridge University Press. • Bretag, T. (2016). <i>Handbook of academic integrity</i>. Springer Singapore. • Rettinger, D. A., & Gallant, T. B. (2022). <i>Cheating Academic Integrity: Lessons from 30 Years of Research</i>. Wiley. • Holbrook, J. B., & Mitcham, C., (2015). <i>Ethics, science, technology, and engineering: a global resource (2nd edition)</i>. Gale, Cengage Learning. • Comstock, G., (2010). <i>Life science ethics (2nd edition)</i>. Springer. • von Braun, J., S. Archer, M., Reichberg, G. M. & Sánchez Sorondo, M., (2021). <i>Robotics, AI, and Humanity: Science, Ethics, and Policy</i>. Springer Nature. 										

	<ul style="list-style-type: none"><li data-bbox="536 181 1393 248">• Loukides, M., Mason, H. & Patil, D. J., (2018). <i>Ethics and Data Science</i>. O'Reilly Media, Inc.<li data-bbox="536 271 1393 456">• Cotton, D. R., Cotton, P. A., & Shipway, J. R. (2023). Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. <i>Innovations in Education and Teaching International</i>, 1-12. https://doi.org/10.1080/14703297.2023.2190148
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