The Hong Kong Polytechnic University

Subject Description Form

Subject Code	FS1000
Subject Title	Science Professionals in Society
Credit Value	3
Level	1
Pre-requisite/ Co-requisite/ Exclusion	Nil
Objectives	(a) To introduce students a variety of science professions for which training is offered by the Faculty of Science, and enthuse them about appreciation of their science major study. (b) To engage students, in their first year of study, in desirable forms of university learning that emphasizes the importance of self-regulation, autonomous learning and deep understanding in the learning process. (c) To provide students with information and insights about different career paths and professions that they could pursue upon graduation from their major programme.
Intended Learning Outcomes	Upon completion of the subject, students will be able to: (a) Describe the role and impact of science and its professional fields in addressing contemporary societal needs at local, national and global levels; (b) Identify the qualities and competences required to become a successful professional in the fields of chemical technology, applied biology with biotechnology, physics, food safety and technology, and nutrition and human health, showcasing technical acumen as future-ready professionals; (c) Reflect on their professional aspirations and develop a personal development plan for pursuing their career goals; (d) Discuss how professionalism and professional ethics are manifested in the professional settings and practices of science discipline. (e) Engage in dialogues with community stakeholders to explore discipline-related issues

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<tr><td>Subject Synopsis/ Indicative Syllabus</td><td>
Disciplinary Lectures/ Seminars
Inspirational lectures/ seminars will be arranged to excite students about their major study and guide them for appreciation of various science disciplines.

Scientific Impact Stories
Senior faculty members or research project leaders will deliver expert seminars on great scientific breakthroughs which shape our modern world.

Industry Insights and Career Aspiration
Alumni and renowned experts from the industry will share their success stories evolved from basic science to applications/ technologies, as well as historical cases and trends of scientific technological innovation. Ethical practices and standards in the science professional will be discussed.

Executive Sharing
Students will interact with senior executive in different industries. They will form groups and engage in more in-depth discussion with the executives in a structured mentorship setting to exchange ideas. These sharing sessions allow experiential learning and reflection, through which they acquire understanding and skills in time and life management, effective presentation, career development, cultural intelligence and global mindset, etc.

Academic and Counselling Support for Science Students
Supporting units like SAO, CPS and Library will introduce their support on university study including internship/ placement, student exchange, mental wellness and library resources.
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<tr><td>Teaching/Learning Methodology</td><td>The course will employ a series of lectures/seminars and sharing session. Weekly lectures/ seminars will provide an overview of different science professionals, inspiring students about their major studies, motivating their career aspirations, and familiarizing them with university study. Through the executive sharing sessions, students will gain self-awareness and develop leadership skills that are central to personal and professional success.</td></tr>
<tr><td>Assessment Methods in Alignment with Intended Learning Outcomes</td><td>
<table>
<tr><td rowspan="2">Specific assessment methods/tasks</td><td rowspan="2">% weighting</td><td colspan="5">Intended subject learning outcomes to be assessed</td></tr>
<tr><td>a</td><td>b</td><td>c</td><td>d</td><td>e</td></tr>
<tr><td>1. Class participation</td><td>10%</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td></tr>
<tr><td>2. In-class quizzes</td><td>40%</td><td>√</td><td>√</td><td>√</td><td>√</td><td></td></tr>
<tr><td>3. Group video</td><td>50%</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td></tr>
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presentation							
Total	100 %						

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

Class participation - Students are expected to attend all lectures/ seminars. They should actively engage in peer discussions and participate in interactive in-class activities.

In-class quizzes – Students will answer MCQ based questions on each lecture/seminar they attended for evaluating their understanding of topics covered in the class. During the executive sharing sessions, students will be engaged through reflective drawing, drafting personal development plan, and story writing, etc.

Group video presentation – Each group will select a relevant science topic, conduct interviews with their academic advisor, and produce an informative and engaging video presentation. This assessment aims to evaluate students' understanding of scientific concepts, as well as their ability to communicate and collaborate effectively.

Student Study Effort Expected

Class contact:	
▪ Lecture/ Seminar	39 Hrs.
Other student study effort:	
▪ Self-study	66 Hrs.
▪ Preparation of the interview with the academic advisor and video presentation	20 Hrs.
Total student study effort	125 Hrs.

Reading List and References

- Science and its History [electronic resource]: a Reassessment of the Historiography of Science by Joseph Agassi, Dordrecht: Springer Science+Business Media B.V., 2008.
- The Discoveries: Great Breakthroughs in 20th-Century Science by Alan Lightman, Knopf Doubleday Publishing Group, 2010.
- The Secrets of College Success/Lynn F. Jacobs, and Jeremy S. Hyman. San Francisco: Jossey-Bass (A Wiley Imprint), 2010.
- The History of Science and Religion in the Western Tradition: an Encyclopedia/Gary B. Ferngren, Edward J. Larson, Darrel W. Amundsen and Anne-Marie E. Nakhla. New York: Garland Pub., 2000.
- A Brief History of Time by Stephen Hawking, Transworld Publishers Ltd, 2015.

	• For the Love of Physics: From the End of the Rainbow to the Edge of Time – A Journey Through the Wonders of Physics by Walter H. G. Lewin, Simon & Schuster, 2012. • The Food Industry: Perceptions, Practices and Future Prospects by Diego T Santos, Nova Science Pub, 2021.