Applied Learning (Senior Secondary Level)

2020-22 Cohort

Learning and Teaching

Subject Title : Aviation Studies
Area of Studies : Engineering and Production
Course Provider : School of Professional and Continuing Education, The University of Hong Kong

In Aviation Studies, student-centred learning and teaching activities are designed to enable students to understand fundamental theories and concepts, develop their generic skills, and address their career aspirations in the aviation industry.

Different modes of activities are employed to provide students with a systematic understanding about the context (e.g. lectures on the overview of the Hong Kong aviation industry) and eye-opening opportunities to experience the complexity of the context (e.g. on-site visits to local aviation organisations, sharing sessions and career talks by the aviation practitioners).

Students acquire an understanding of the requirements, fundamental knowledge and skills essential for further learning within the area through learning-by-practising opportunities in an authentic or near-authentic environment (e.g. workshops under simulated working environment with industry grade tooling at industry standard).

Students are also encouraged to develop and apply conceptual, practical and reflective skills to demonstrate entrepreneurship and innovation (e.g. case studies to evaluate the impact of the aviation industry on the local economy and analyse the operation of various aviation organisations). Students are given opportunities to integrate the knowledge and skills acquired and consolidate their learning (e.g. in the aviation projects, students investigate the authentic cases in aviation and suggest solutions. Students are expected to make use of the knowledge acquired and present their findings in a systematic way. In the process, students apply practical skills at industrial standard, demonstrate problem-solving skills through tackling aviation-related issues with multi-disciplinary knowledge, and prepare reports and group presentation. During the project, students are also expected to demonstrate the positive values and attitudes required in the aviation industry).

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Curriculum Pillars of Applied Learning in Context – Aviation Studies

Upon completion of the subject, students should be able to:

- describe the functions and operation of various aviation organisations including airport authority and airlines;
- describe international regulations and standard requirements in the aviation industry;
- apply practical skills in the aviation industry;
- demonstrate problem-solving skills through tackling aviation-related issues with multi-disciplinary knowledge;
- appreciate the importance of teamwork and communication in the aviation industry;
- appreciate the latest development and achievements in engineering in related fields
- describe the work ethics and demonstrate positive values and attitudes in the aviation industry; and
- develop self-understanding for further studies and career development in the related field.

Through the specific contexts related to the subject, students have different learning opportunities, for example:

1. <u>Career-related Competencies</u>

- understand the future development trend of the local and global aviation industry through on-site visits and career talks by industry practitioners;
- explain the functions and operation of various aviation organisations; and
- enhance understanding of industry competency requirements through practical exercises which are set according to the industry standard.

2. <u>Foundation Skills</u>

- strengthen language ability through reading relevant information on local and international aviation regulations which is usually written in English;
- strengthen communication skills both in verbal and written forms through working on-site visits and project reports, presentation and role-play practice;
- consolidate mathematical concepts and strengthen problem-solving skills by working on aviation related tasks; and
- strengthen information technology skills through doing research and information collection for assignments and projects.

3. Thinking Skills

- integrate knowledge from different aspects including Science, Mathematics, Geography and Liberal Studies, as well as knowledge of Human Biology and Psychology covered in topics on aviation human factors;
- develop critical thinking skills and analytical skills through discussions on authentic aviation cases which will stimulate students' thinking and further understanding of the competency required in the aviation industry;
- enhance thinking skills through participation in regular class activities including role-play, simulation exercises, presentations and site visits; and
- develop skills in problem-solving and decision-making through project works which require information search and filtering, and results analysis and consolidation.

4. People Skills

- develop team building skills through participating in the establishment and operation of self-directed working teams;
- enhance concept of division of work through group projects and role-play activities in class;
- develop skills in interpersonal communication and interaction through practicing simulated aviation operation procedures at industrial standard; and
- develop self-management skills through practice under simulated aviation working environment where students are required to follow industrial regulations and guidelines.

5. Values and Attitudes

- develop responsibility through understanding the high safety requirements in the aviation industry;
- develop concept of rights and obligations, and respect for safety of other people through experience sharing by lecturers and guest speakers from the industry; and
- develop self-confidence through successful completion of practical work with feedback by tutors.