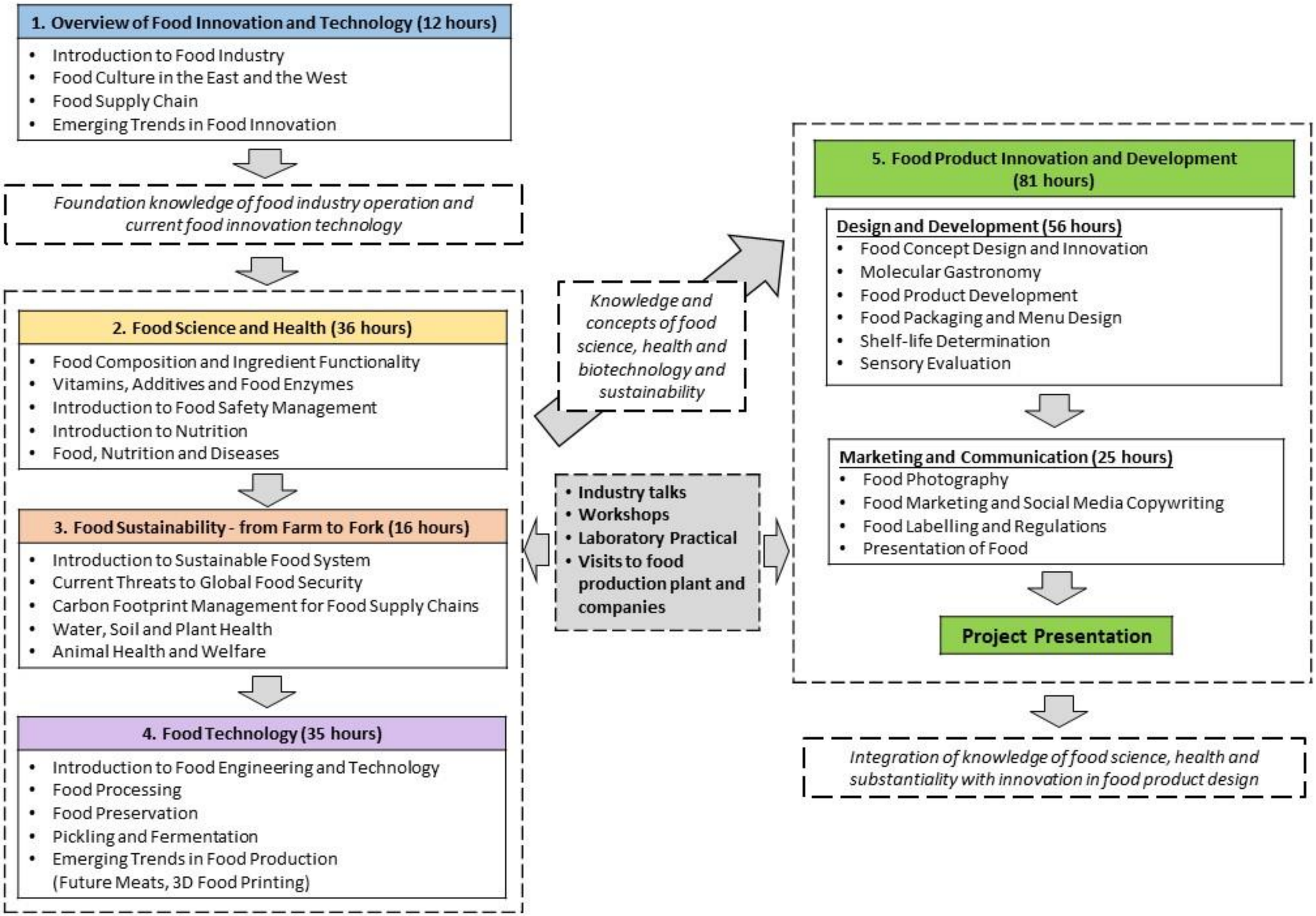
Applied Learning

2023-25 Cohort; 2025 HKDSE

Item	Description
1. Course Title	Food Innovation and Science
2. Course Provider	School of Professional and Continuing Education, The University of Hong Kong
3. Area of Studies/ Course Cluster	Applied Science/ Food Science
4. Medium of Instruction	Chinese or English
5. Learning Outcomes	Upon completion of the course, students should be able to: (1) describe the different roles and functions in food industry and the food supply chain; (2) describe the key steps in food product innovation and development; (3) demonstrate the fundamental knowledge and skills in food science and technology; (4) integrate the knowledge of food science, health, sustainable agricultural practices and food culture with innovative design principles in developing innovative and safe food products; (5) demonstrate the positive values and attitudes for food security and sustainable food system; (6) employ effective communication skills in collaborating with teammates through participation in the group activities and project; and (7) develop self-understanding for further studies and career development in the related field.

6. Curriculum Map – Organisation and Structure



7. The Context

- The information on possible further study and career pathways is provided to enhance students' understanding of the wider context of the specific Applied Learning course. Students who have successfully completed Applied Learning courses have to meet other entry requirements as specified by the institutions.
- The recognition of Applied Learning courses for admission to further studies and career opportunities is at the discretion of relevant institutions.

Possible further study and career pathways

Further studies

- e.g. food and nutritional sciences, food product and development, testing and certification, food technology, microbiology, applied chemistry, research, marketing & business administration

Career development

- e.g. dietitians, nutritionists, food scientists, food R&D technologists, food safety auditors, hygiene inspectors, testing and inspection

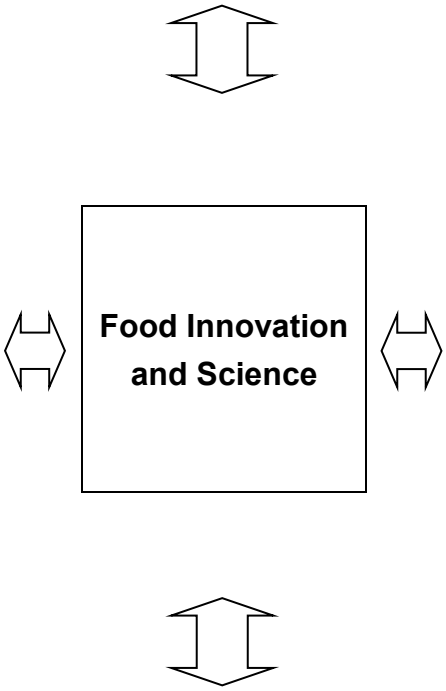
Relations with core subjects and other elective subjects

Enhancing and enriching**,** e.g.

- application of principles and concepts in **Biology** and **Chemistry** in the study of the food science, food technologies and food sustainability reinforces the learning of these subjects
- enhancing the depth and breadth of the technology knowledge in **Design and Applied Technology** and **Technology and Living** through the Innovative Food Product Development Project

Expanding horizons**,** e.g.

- students taking **Humanities subjects** may broaden their views and enhance their all-round development through taking this course to meet the changes and challenges raised from social, economic, scientific and technological developments



Relations with other areas of studies/ courses of Applied Learning

e.g.

Business, Management and Law

- understanding of the food labelling and regulation, as well as food marketing that is commonly used in food industry

Services

- understanding of customers' health requirements, preferences and concerns through information search for the design of new food products

Foundation knowledge developed in junior secondary education

The course is built upon the foundation knowledge students acquired in, e.g.

- **Chinese Language Education** and **English Language Education** – verbal and written communication
- **Mathematics Education** – calculation, measurement and data handling
- **Technology Education** – information search, word and data processing, making use of IT in presentation
- **Science Education** – basic science knowledge

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Learning and Teaching

Course Title	:	**Food Innovation and Science**
Area of Studies	:	**Applied Science**
Course Provider	:	**School of Professional and Continuing Education, The University of Hong Kong**

In Food Innovation and Science, 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 food product development and nutrition industry.

Different modes of activities are employed to provide students with a systematic understanding about the context (e.g. lectures to introduce the theory and tools used in food science technology and innovation) and eye-opening opportunities to experience the complexity of the context (e.g. visit to food factories and local organic farms, as well as sharing by industry professionals to broaden students' horizons and to recognise the importance of modern food technology and food sustainability).

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. laboratory practical in food science and technology as food technologists to apply the knowledge and technique of food science and technology to create and test innovative food products).

Students are also encouraged to develop and apply conceptual, practical and reflective skills to demonstrate entrepreneurship and innovation. Students are given opportunities to integrate the knowledge and skills acquired and consolidate their learning (e.g. In the food product innovation and development project, students have a learning opportunity to create an innovative food product by using appropriate food technology and tools. During this process, students apply the knowledge and skills in processing and packaging the food products at industrial standard. Students are expected to demonstrate the positive values and attitudes in developing new food product that comply with food security and sustainable food system).

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Curriculum Pillars of Applied Learning in Context – Food Innovation and Science

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

1. **Career-related Competencies**
   - develop food science knowledge and skills related to food product development;
   - apply analytical skills in food analysis and technologies in food production; and
   - develop students' potential and interests in innovative design in food production to align with the long-term development of Hong Kong.

2. **Foundation Skills**
   - enhance communication skills both in verbal and visual forms through participation in site-visits and report preparation, presentation and practical exercises;
   - enhance information technology skills through doing research and information collection for assignments and projects; and
   - enhance numeracy skills through exercises on food analysis.

3. **Thinking Skills**
   - develop critical thinking and analytical skills through discussions on real life cases and practical exercises which will stimulate students' thinking and further understanding of the competency required by the industry;
   - develop skills in problem solving and decision making through case study on the issues of food sustainability and innovation food product development project works which require information search and filtering; and
   - appreciate the future development trend in sustainable food production and its economic value through real life case studies.

4. **People Skills**
   - develop self-management skills through individual practical exercises and group works; and
   - enhance team building skills and concept of division of works through group projects and the practical exercises.

5. **Values and Attitudes**
   - develop self-confidence along with the coherent understanding of the application of knowledge and skills in food and health technologies; and
   - establish self-esteem and positive attitudes towards the use of new and advanced technologies in developing innovative and sustainable food products.