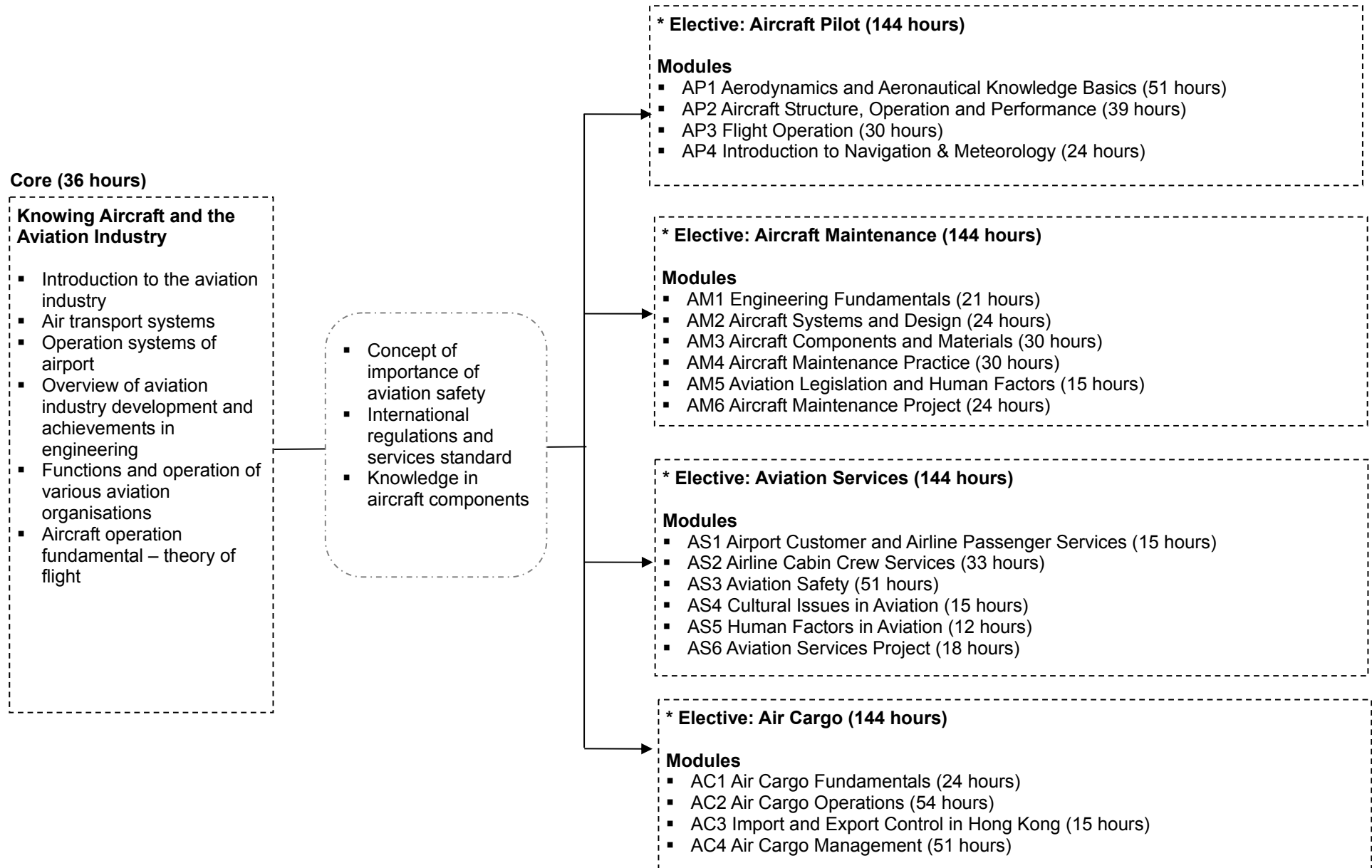


Applied Learning (Senior Secondary Level)**2016-18 Cohort**

Item	Description
1. Subject Title	Aviation Studies
2. Course Provider	School of Professional and Continuing Education, The University of Hong Kong
3. Area of Studies/ Course Cluster	Engineering and Production/Services Engineering
4. Medium of Instruction	Chinese or English (The course will be conducted in English for students taking "Aircraft Pilot" elective)
5. Learning Outcomes	<p>Upon completion of the subject, students should be able to:</p> <ul style="list-style-type: none"> (1) describe the functions and operation of various aviation organisations including airport authority and airlines; (2) describe international regulations and standard requirements in the aviation industry; (3) apply practical skills in the aviation industry; (4) demonstrate problem-solving skills through tackling aviation-related issues with multi-disciplinary knowledge; (5) appreciate the importance of teamwork and communication in the aviation industry; (6) appreciate the latest development and achievements in engineering in related fields; (7) describe the work ethics and demonstrate positive values and attitudes in the aviation industry; and (8) develop self-understanding for further studies and career development in the related field.

6. Curriculum Map – Organization and Structure (Aviation Studies – Overview)



* Choose any one of the electives

Curriculum Map – Organisation and Structure (Elective: Aircraft Pilot)

Knowing Aircraft and the Aviation Industry (Common Core Module)

- Introduction to the aviation industry
- Airport transport systems
- Operation systems of airport
- Overview of aviation industry development and achievements in engineering
- Functions and operation of various aviation organisations
- Aircraft operation fundamental – theory of flight

AP1 - Aerodynamics and Aeronautical Knowledge Basics

- Terminology and documents
- Introduction to abnormal flying conditions
- Ground manoeuvre, takeoff and landing
- Principles of flying and the four forces in flight

AP2 - Aircraft Structure, Operation and Performance

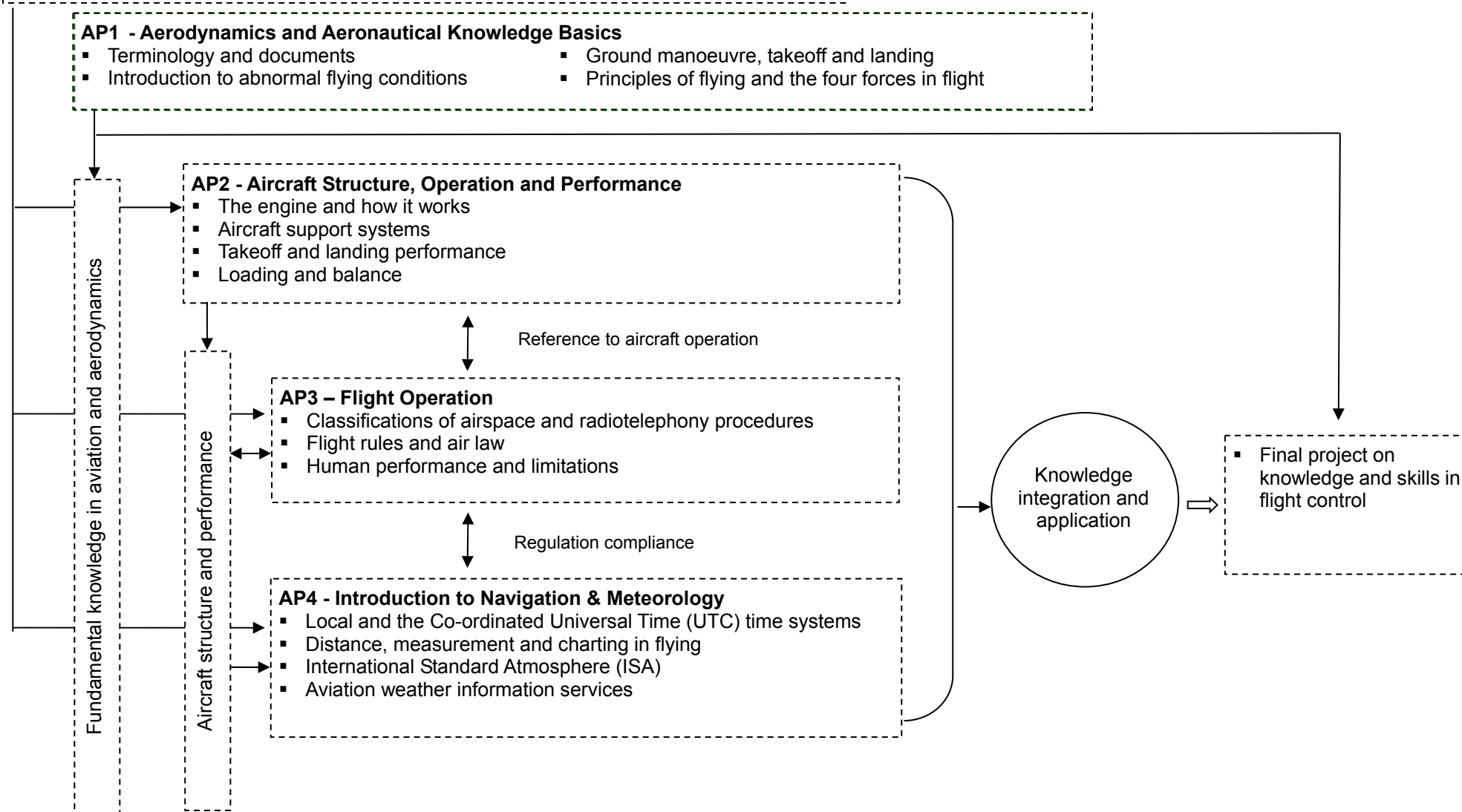
- The engine and how it works
- Aircraft support systems
- Takeoff and landing performance
- Loading and balance

AP3 – Flight Operation

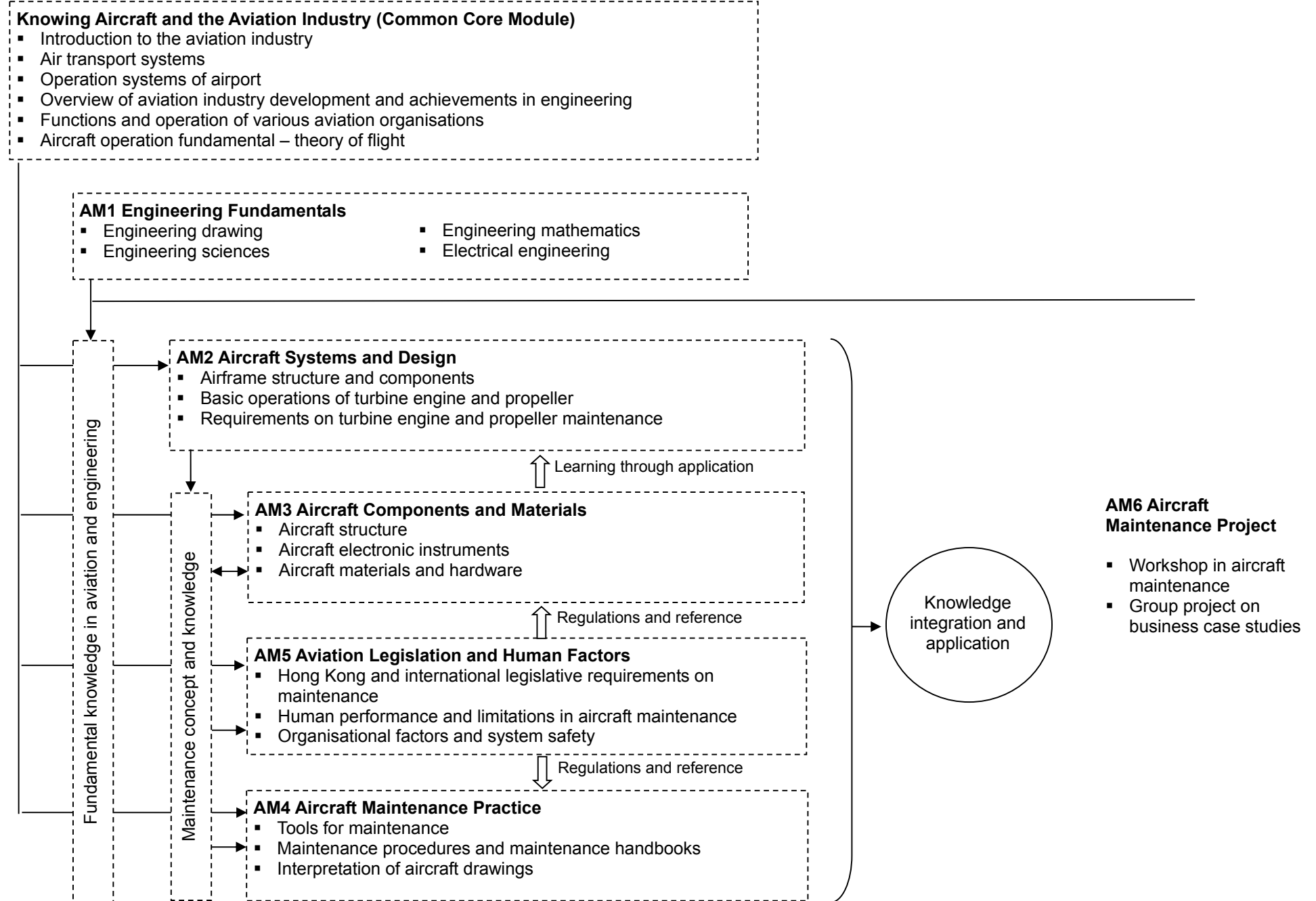
- Classifications of airspace and radiotelephony procedures
- Flight rules and air law
- Human performance and limitations

AP4 - Introduction to Navigation & Meteorology

- Local and the Co-ordinated Universal Time (UTC) time systems
- Distance, measurement and charting in flying
- International Standard Atmosphere (ISA)
- Aviation weather information services



Curriculum Map – Organisation and Structure (Elective: Aircraft Maintenance)



Curriculum Map – Organisation and Structure (Elective: Aviation Services)

Knowing Aircraft and the Aviation Industry (Common Core Module)

- Introduction to the aviation industry
- Air transport systems
- Operation systems of airport
- Overview of aviation industry development and achievements in engineering
- Functions and operation of various aviation organisations
- Aircraft operation fundamental – theory of flight

AS1 Airport Customer and Airline Passenger Services

- Airport customer behaviour
- Airport customer service features
- Airline guide and IATA manuals
- Passenger handling procedures

AS2 Airline Cabin Crew Services

- Personal essentials for cabin crew profession
- Customer interaction and communication
- Crew resources management
- Airline catering

AS3 Aviation Safety

- Responsibility for security control of people and items
- Procedures for handling restricted and dangerous articles
- Aviation first aid

AS4 Cultural Issues in Aviation

- Cultural impacts on customer service
- Cultural awareness and coping with cultural differences
- Regional culture

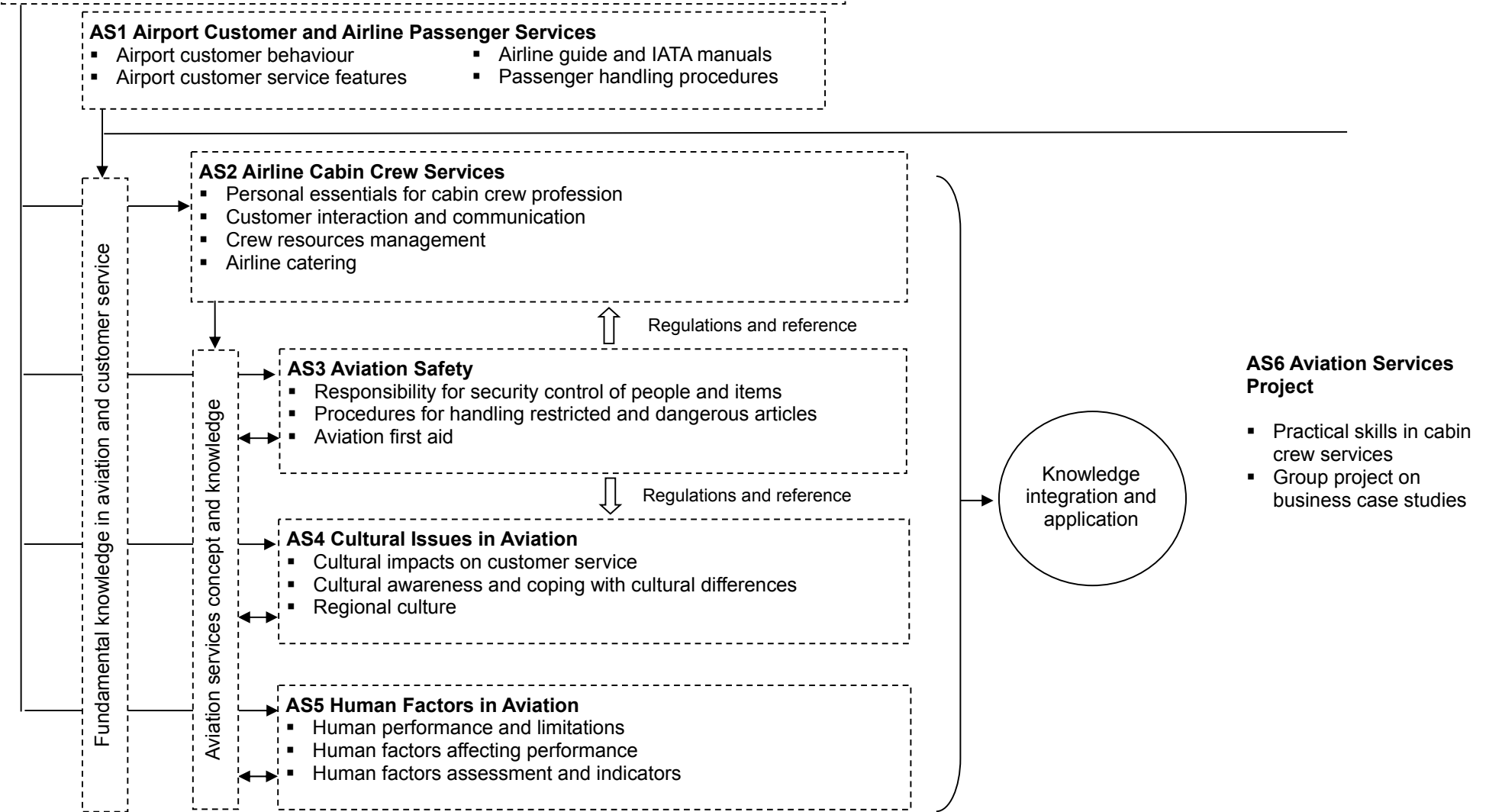
AS5 Human Factors in Aviation

- Human performance and limitations
- Human factors affecting performance
- Human factors assessment and indicators

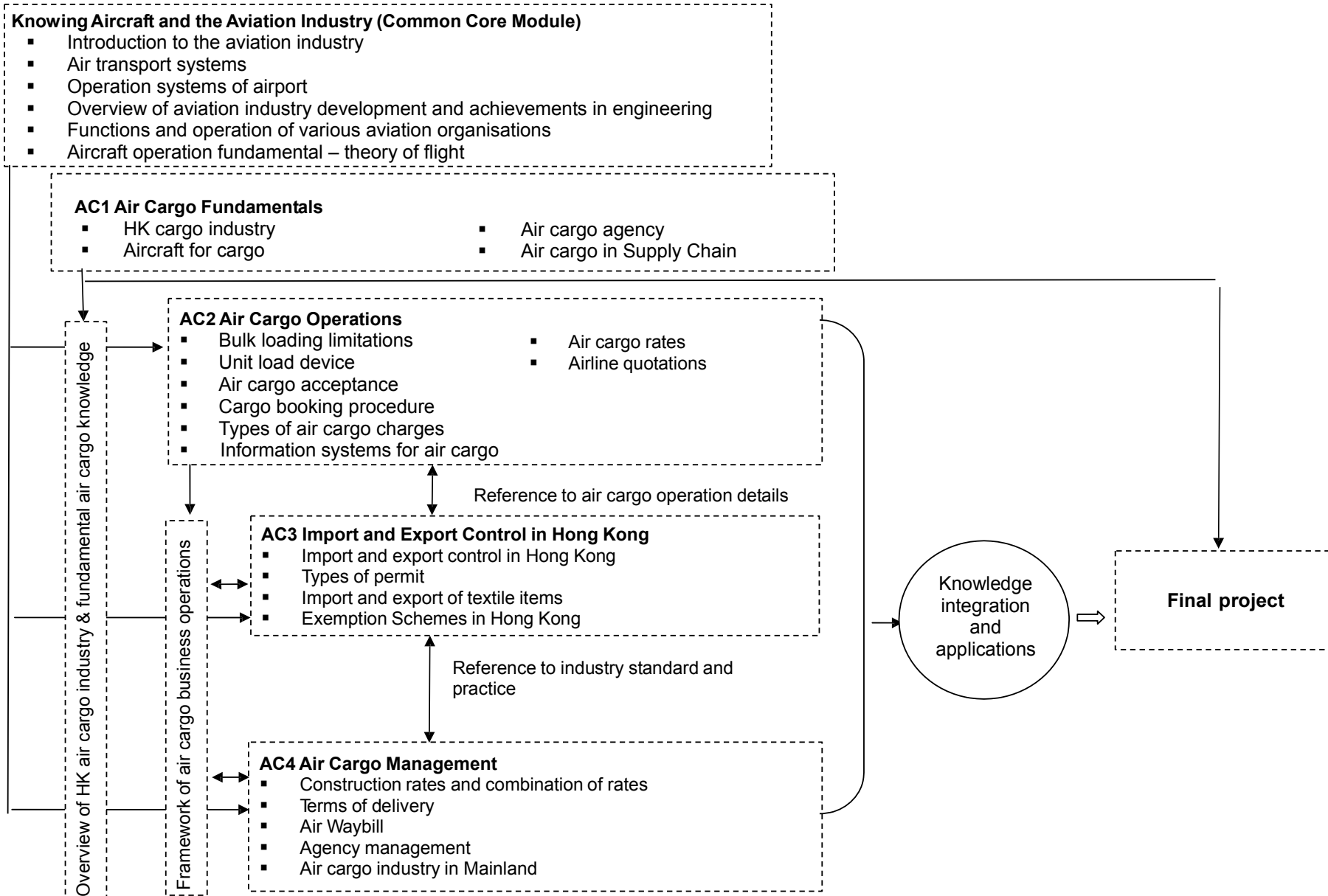
AS6 Aviation Services Project

- Practical skills in cabin crew services
- Group project on business case studies

Knowledge integration and application



Curriculum Map – Organisation and Structure (Elective: Air Cargo)



7. Context

- The information on possible 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. The Education Bureau and the course providers of Applied Learning are exploring and seeking recognition related to further education and career development opportunities for students successfully completing the Applied Learning courses.

Possible further study and career pathways

Further studies

- e.g. aviation, engineering, tourism, human resources management, logistics, transportation

Career development

- e.g. aircraft cadet pilot, aircraft maintenance trainee, engineer in aircraft maintenance/aircraft manufacture, mechanical engineer, cabin crew, customer service officer, air cargo officer, ground handling and ramp service agent

Other qualification (for Aircraft Pilot elective and Aircraft Maintenance elective)

- e.g. for Aircraft Pilot elective: Private Pilot Licence
(Note: Additional practical flying training is required in order to fully complete the qualifications of Private Pilot Licence. The practical flying sessions are not included in the Applied Learning Aviation Studies curriculum and it is optional for students to attend the practical flying sessions. The Aircraft Pilot elective focuses on the theory of flight and practical exercises will mainly be computer-based flight simulation. HKU SPACE will provide students with information on practical flying sessions which will be conducted overseas, such as at Adelaide or Brisbane in Australia. Extra expenses are required for the practical flying sessions.)
- e.g. for Aircraft Maintenance elective: Civil Aviation Department HKAR-66 Category A Aircraft Maintenance Licence
(Note: Additional practical aircraft maintenance training and a pass in the Civil Aviation Department (CAD) examinations are required in order to fully meet the requirements for the qualifications of HKAR66 Category A Aircraft Maintenance Licence. The practical training and the CAD examinations are not included in the Applied Learning Aviation Studies curriculum.)



Relations with core subjects and other elective subjects

Enhancing and enriching, e.g.

- this subject enhances students' learning in **Liberal Studies** by enriching their knowledge of globalisation

Cross-fertilisation, e.g.

- the application of concepts and theories in **Physics** (e.g. force and motion, electricity and magnetism) enhances the learning in both subjects
- the application of concepts and theories in **Tourism and Hospitality Studies** (e.g. customer relations and services) enhances the learning in both subjects

Expanding horizons, e.g.

- students taking **Personal, Social and Humanities Education** subjects can broaden their knowledge in aviation and engineering
- students taking **Science** subjects can broaden their knowledge in cultural issues in aviation



Cluster of professions/trades/industries related to the course

- e.g. aviation, engineering, logistics & services

Future global and local outlook

- It is expected that the Asia-Pacific, especially the Mainland, will become an increasingly important market in terms of air traffic. Air transport demand including passenger and cargo is expected to grow
- During the time of rapid growth in the aviation industry, the role of training is becoming more significant to ensure a steady supply of competent aviation workforce, enhance safety and efficiency of the aviation system and eventually sustain the growth of the aviation industry
- Being the major hub of air traffic in the region, Hong Kong's aviation industry is facing the challenge of shortage in manpower supply

Beginners' skill set to facilitate entry to further studies and/or work

- Understand the functions and operation of various aviation organisations
- Understand international and local industry standard requirements
- Understand the fundamental concepts in aircraft operation
- Apply basic practical skills in the aviation industry
- Develop the personal attributes essential to the aviation industry such as effective communication



Relations with other areas of studies/courses of Applied Learning

Business, Management and Law, e.g.

- legal requirements in maintenance

Services, e.g.

- the concepts, values and attitudes underpinning service provision particularly for the unique operating environment and requirements in aviation service



Foundation knowledge developed in basic education and Secondary 4

This subject is built upon the foundation knowledge students acquired in, e.g.

- **Chinese Language Education and English Language Education** – verbal and written communication
- **Mathematics Education** – data handling, measures and calculation
- **Technology Education** – use of information technology
- **Science Education** – force and motion
- **Geography** – map reading
- **Personal, Social and Humanities Education** – culture and its impact on customer service