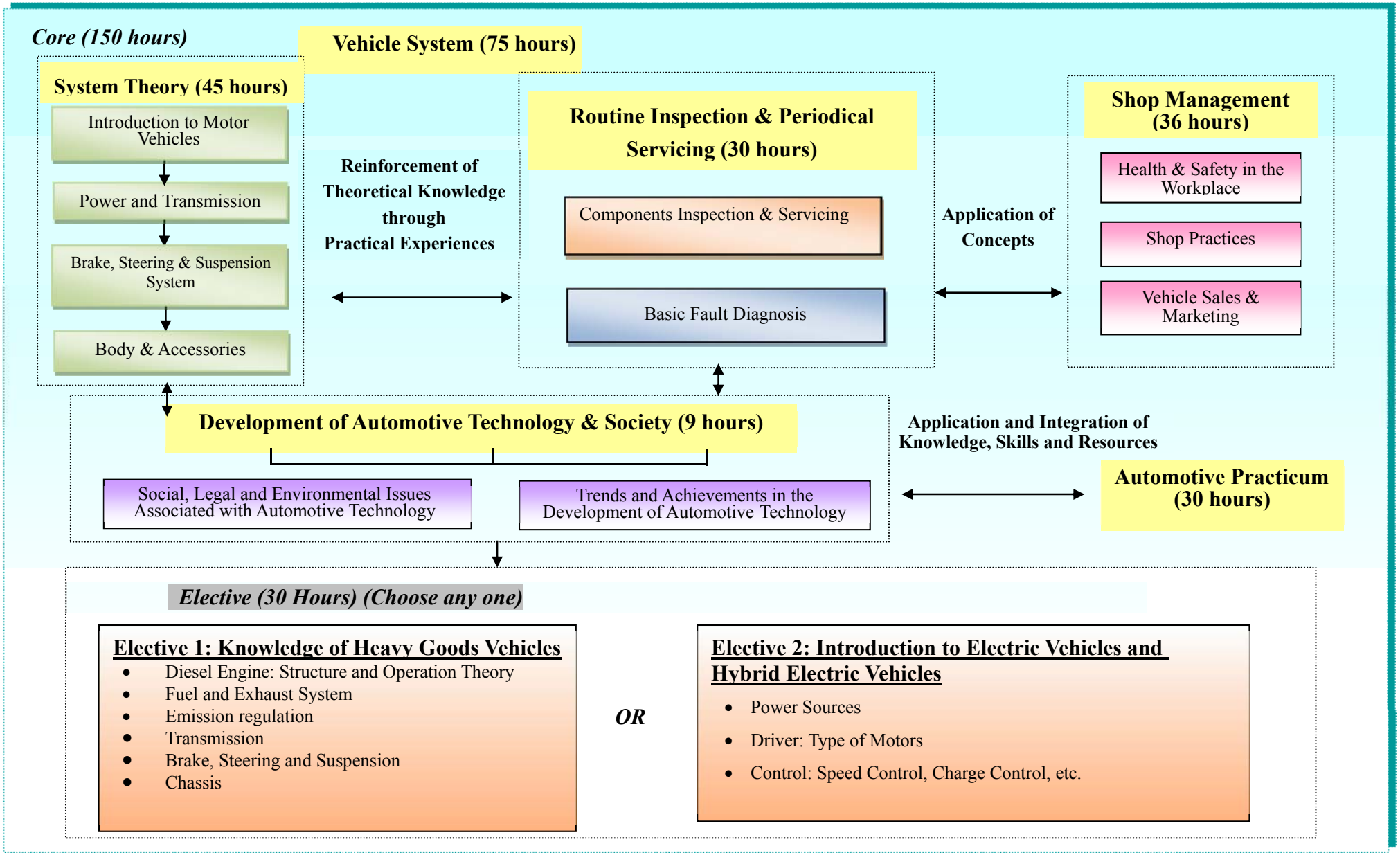
Applied Learning (Senior Secondary Level)

2016-18 Cohort

Item	Description
1. Subject Title	Automotive Technology
2. Course Provider	Caritas Institute of Community Education
3. Area of Studies/ Course Cluster	Engineering and Production/ Civil, Electrical and Mechanical Engineering
4. Medium of Instruction	Chinese or English
5. Learning Outcomes	Upon completion of the subject, students should be able to: (1) describe safe work practices and procedures and outline the requirement for a healthy work environment; (2) apply the operating principles of the major systems of a vehicle to complete basic fault-diagnosis; (3) access, identify and apply technical information to perform accurate measurements, calculations and tests on various components of a vehicle; (4) demonstrate the capability of problem-solving, decision-making and communication in tackling technological issues; (5) explain and analyse the inter-relationship between automotive technology and society; (6) demonstrate an understanding of current issues and trends in the automotive industry, and the latest technologies used by the automotive industry to meet current emissions, fuel economy, and safety regulations; (7) demonstrate professional ethics, honesty, and respect when dealing with customers, co-workers, and supervisors; and (8) develop self-understanding for further studies and career development in the related field.

6. Curriculum Map – Organisation and Structure



The 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. automotive technology, vehicle engineering, electrical engineering, mechanical engineering, industrial technology, applied science & technology

Career development

- e.g. motor vehicle engineer, project manager, customer service representative, servicing technician, automotive damage surveyor, vehicle sales and marketing personnel, parts salesperson

Relations with core subjects and other elective subjects

Enhancing and enriching, e.g.

- the knowledge acquired in **Science**, such as force and motion, electricity and magnetism, law of conservation of energy, electrical enlightenment, balance in nature, energy, weather and air quality, and the knowledge acquired in **Design and Applied Technology**, such as design in practice, design considerations, design and communication and nature of technology, enhance the learning in this subject

Cross-fertilisation, e.g.

- the application of knowledge and skills acquired in **Information and Communication Technology** (e.g. Internet services and applications, presentation of information) enhances the learning in both subjects

Expanding the horizons, e.g.

- students specialising in other areas such as **Personal, Social and Humanities Education** can broaden their knowledge in the automotive industry and engineering

Cluster of professions/trades/industries related to the course

- e.g. vehicle servicing, parts management, auto sales and marketing, auto parts trading and insurance

Future global and local outlook

- Increasing demand for vehicles and auto-parts
- Increasing demand for automotive workers with technological skills due to heightened standards in automotive maintenance
- Tightened monitoring on vehicle emissions by governments
- Increasing opportunities for young talents

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

- Knowledge of safe work practices and procedures
- Skills in using tools and equipment
- Ability to perform minor vehicle repairs/replacement
- Knowledge of current sources of information on automotive technology
- Appropriate attitudes and work ethics

Relations with other areas of studies/courses of Applied Learning

Business, Management and Law

- e.g. theories and concepts in marketing related to vehicles sales and marketing

Foundation knowledge developed in basic education and Secondary 4

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

- **English Language and Chinese Language Education** – linguistic skills to acquire, apply and disseminate knowledge, the ability to communicate effectively
- **Mathematics Education** – numerical skills, measurement skills, graph drawing techniques
- **Science Education** – ability to use scientific methods to analyse and solve problems, critical thinking skills
- **Technology Education** – technological know-how for problem-solving, researching, data processing