# 9/10 Automotive Scope and Sequence 2017

The Automotive course provides opportunities for students to develop knowledge, understanding and skills in relation to automotive maintenance and associated industries.

Core modules develop knowledge and skills in the use of materials, tools and techniques related to automotive maintenance and repair which are enhanced and further developed through practical applications and the study of specialist modules in automotive technologies.

Practical projects reflect the nature of the Automotive focus area and provide opportunities for students to develop specific knowledge, understanding and skills related to automotive-related technologies. These may include:

* maintenance and repair of small engines
* building tools used in the industry
* constructing a chassis (billycart)/or small engine powered vehicle
* work undertaken on isolated automotive components.

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| Unit/Module | Component/s | Overview | Proposed Assessment | Timing |
| Module 1 | OHS and Risk Management, Power Sources, Engine and Related Systems, Automotive Electrical Systems, Chassis and Related Components | safely use tools, materials and equipment as well as personal protective equipment  when working with materials, tools and machines, identify the major components  of and differentiate between the operation of 2-stroke and 4-stroke motors,  disassemble, clean, inspect, identify and re-assemble a 2-stroke motor identify and  describe the major components in a 4-stroke single-cylinder engine, | Safety Booklet, Tools Booklet, Fundamentals of automobiles booklet, Oil Filter Remover, Tack Hammer, tear down and rebuild two stroke motor | **Semester 1** |
| Module 2 | Engine and Related Systems,  Automotive Electrical Systems,  Chassis and Related Components | different engine configurations available, internal combustion cooling systems,  internal combustion lubrication systems, describe braking systems used in vehicles, identify major components of a selected braking system (drum brakes, leading shoe, trailing shoe, friction materials, disc brakes, fixed caliper and floating caliper) perform basic maintenance and adjustment to a braking system, identify the major components of a and engine and differentiate between the processes. | Test on Brakes labelling parts, Test on Engine identification and cycle, F-Clamp, Fundamentals of automobiles booklet | **Semester 2** |
| Module 3 | Engine and Related Systems,  Automotive Electrical Systems,  Chassis and Related Components | electronic ignition electrical components, manual transmission, automatic transmission, continuous variable transmission., | tests on auto electrical systems, suspension and steering components, G-clamp?, fundaments of automotive booklet | **Semester 3** |
| Module 4 | Engine and Related Systems,  Automotive Electrical Systems,  Chassis and Related Components | the operation of at least two power sources other than internal combustion, the  steering system, design principles and processes | Portfolio of work including billy cart/ Powered vehicle designs, fundaments of automotive booklet working on construction of billy cart for challenge. | **Semester 4** |

Projects promote the sequential development of skills and reflect an increasing degree of student autonomy as they progress through the course.