



**Delta Secondary School**  
**Home of the Pacers**

**Course Outline**  
**Technology Education**  
**Mr. Mynott**

---

## **Automotive 12 – Engine & Drive Train**

---

### **Welcome to Automotive 12 – Engine and Drive Train!**

This course is not designed to make you a full fledged mechanic. It is designed to give you an advanced taste of working on engine and drive train specific projects. This being a specific target course means that you will be doing work in the previously mentioned areas but not limited to those. You will have the opportunity to be working on projects that could range from and engine overhaul to drive train repair. This course is a much more concentrated look at the below topics in comparison to the General course.

#### **Course Content:**

Engine	Drive Train
<ul style="list-style-type: none"><li>● Engine Fundamentals</li><li>● Piston Engine Operation</li><li>● Engine Types</li><li>● Engine Construction</li><li>● Valves and Valve Trains</li><li>● Engine Measurements and Performance</li></ul>	<ul style="list-style-type: none"><li>● Clutches</li><li>● Manual Transmissions and Transaxles</li><li>● Four Wheel Drive and Transfer Cases</li><li>● Automatic Transmissions and Transaxles</li><li>● Drive Lines and Universal Joints</li><li>● Differentials and Drive Axles</li></ul>

#### **Course Evaluation:**

Assignments 70% (Includes Shop Log Sheets), Quizzes 20%, and Participation 10%

#### **Report Weighting:**

Term 1        20%  
Term 2        30%  
Term 3        50%

Possible Third Term Project – In this case the project would be worth 10% of the final mark making Term 3 worth 40% of the overall grade.

**Note: You must receive a pass (50%) in both the theory and practical portions of the course if you wish to pass the course.**

**Theory:**

I consider Automotive theory to be very important. You will be expected to arrive to class on time and to bring a working pen with you as well as a note book. Throughout the course there will be unit tests. Or, as I like to call them, quizzes. There is little assigned homework in this course. Mostly, your homework will be to review the information presented in class to ensure that you are ready for the unit quiz. All the quizzes in this course are open book. This is not to say that they are easy but you should have all your handouts neat and organized for the unit quizzes.

Initially the course will be theory only until we have covered the safety component. After this the first unit will be introduced and we will commence working in the shop on a variety of projects.

**Shop Work:**

Where possible you will be doing work directly related to the theory that we are covering. If you own a car then you have the option to be doing the work on this. If you don't own a car then you could try asking a friend or relative. You can assure them that the work will be supervised by me. There will be times that I may ask you to do work on someone else's car or maybe clean the shop. I expect that you will do wither willingly and to the best of your ability.

**Expectations:**

I have very high expectations for your work and your behavior in the shop. You will be working on potentially expensive, in some manner very complex, and possibly lethal vehicles. There is no room in the auto shop for a clown or a careless worker. You will be expected to wear sensible shoes, safety equipment (eye and hearing protection) when required, and coveralls in the shop, I can help you buy the latter at a fair price. There are no fees in this course. But, if you are doing work on your car you must pay for the cost of the parts needed. Each student must be willing to take their turn in charge of the tool room when asked. **REMEMBER** – you must act in a safe responsible manner **AT ALL TIMES**. If you insist on breaking this rule you will be choosing to withdraw from the course.

**Supplies:**

Limited supplies like oil, antifreeze, filters etc. will be available (check with me before hand to be safe). I expect that after work is completed and you have ordered parts through the auto shop that you will pay in a timely manner in the form of a cheque payable to Delta Secondary School or in the form of cash. I will not extend credit to anyone using the shops supplies, SO, don't ask!

**Parking:**

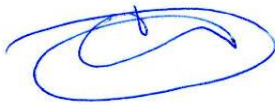
Please note the yellow marked areas that say "AUTO" these are off-limits to you unless you have my express permission. Please **DO NOT** park in front of the shop bay doors, you will only slow down the beginning of shop class. Students persist in parking incorrectly may have their car "incapacitated" by me, and may lose certain privileges. Some of the spots have to be left clear so that our customers can leave their cars for us to work on.

**Attitude / Trust:**

These are two very important items. Your attitude is the most important item that people look for (especially employers). It doesn't matter how much you know if you have a good attitude and are willing to learn. Trust is somewhat like respect – you have to earn it – and like respect it can be lost very quickly.

**Conclusion:**

Having laid down the rules in a somewhat stern manner let me assure you that if you act as a responsibly mature students you will find me to be a friendly and helpful person. If circumstance permit there will be open shop for two hours every other week to enable you to do extra work or to make up missed time (missed shop time and theory quizzes may be made up provided you have a legitimate excuse for being absent). I am looking forward to a pleasant year working with you. I am sure that you will find this one of the most rewarding and useful courses that you may ever take. PS...You will find that I, like most people, respond very well to the following phrases: "Please" "Thanks you" and "You're welcome".



Mr. Mynott