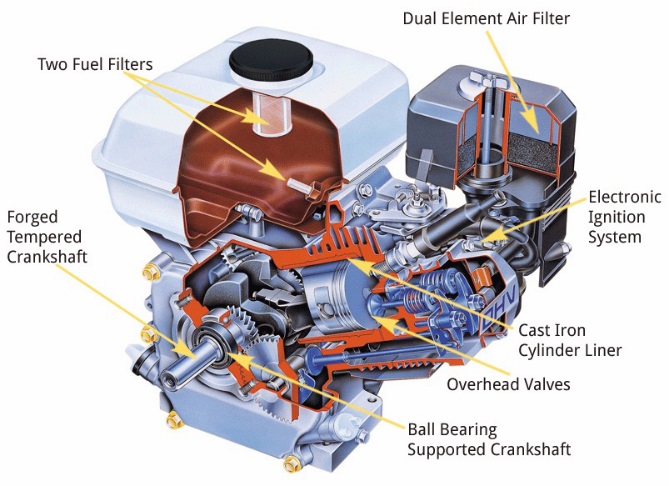
**Small Engines: Syllabus**

# Unit 1: Shop Safety

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| * Attire, Tool use, Fuels, Storage * Fire safety |  |

# Unit 2: Basic Tools and Engine Tools

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| * Hand Tool use and Identification | * Specialty tools |

# Unit 3: Fasteners and Hardware

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| * Fastener Types and Identification * Springs, coils, retainers, keys * Clearances and Feelers | * Tap, Die, Thread gauge uses * Rulers, Calipers, Micrometers |

# Unit 4: Electrical

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| --- | --- |
| * Basic Circuits * Using a Multimeter | * Measuring Volts, Amps, Ohms |

# Unit 5: Small Engine Basics and Components

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| * 2 stroke vs. 4 Stroke * Engine parts & components * Engine variations | * Part Identification * Pistons, Rods, crankshafts, valves * Reading Technical Diagrams & Repair docs |

# Unit 6: Fuel/ Air/ Spark/ Horsepower!!

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| --- | --- |
| * Fuel ratios and mixing * Sparkplugs * Gaskets and seals | * Calculating and understanding Horsepower |

# Unit 7: Carburetors

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| --- | --- |
| * Carburetor types and function * Cleaning and repair | * High and Low fuel/air adjustments |

# Unit 8: Troubleshooting and Repair

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| * Common Problems * How to troubleshoot starting problems | * Gasket repair * Ordering Parts |

# Unit 9: Special Projects

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| * Equipment Repair (family/friends) * Personal project: lawnmower bike, go-kart, custom machine |  |