



UNIVERSITAT  
POLITÈCNICA  
DE VALÈNCIA



# LBG Valencia Spring Course 2015:

Warm me up,  
my engine is ready!

Prematerials



# Prematerials

The course's objective is to give a short overview on different aspects of reciprocating internal combustion engines and thus we have selected a number of prematerials needed for the appropriate following of the course. In this document these are listed in relation to the type of document:

- Links:

|                   |   |
|-------------------|---|
| Name              | <a href="#">Reciprocating Internal Combustion engines</a>                   |
| Topic             | I.C. engines  |
| Short description | An overview on general aspects of reciprocating Internal Combustion engines |

|                   |   |
|-------------------|---|
| Name              | <a href="#">Classification Of Internal Combustion Engines</a>                           |
| Topic             | I.C. engines  |
| Short description | A general view on the different applications of the modern internal combustion engines. |

|                   |  |
|-------------------|--|
| Name              | <a href="#">Internal Combustion Engines Fundamentals</a>   |
| Topic             | I.C. engines   |
| Short description | MIT OCW on internal combustion engines. Highly recommendable to review their lecture notes on combustion, heat transfer and turbocharging. |

- Books:

|                              |   |
|------------------------------|---|
| Name                         | <a href="#">Internal Combustion Engines</a>   |
| Topic                        | I.C. engines - Combustion   |
| Short summary of the content | An extensive and excellent professional reference text on I.C. engines with an excellent explanation of combustion and heat transfer principles |
| Chapter                      | 7 – Combustion & 8 – Heat Transfer in IC Engines  |
| Author                       | Fernando Salazar  |

|                              |   |
|------------------------------|---|
| Name                         | <a href="#">Control of Exhaust Emissions from Internal Combustion Engines</a>         |
| Topic                        | I.C. engines - Emissions  |
| Short summary of the content | A concise technical text on pollutants and strategies for emission reduction          |
| Chapter                      | 3 - Formation of Pollutants and Their Estimation<br>3.1 - Internal Combustion Engines |
| Author                       | G. Cholakov   |

|                              |   |
|------------------------------|---|
| Name                         | <a href="#">Engineering Fundamentals of the Internal Combustion Engine</a>                                  |
| Topic                        | I.C. engine – Air Management  |
| Short summary of the content | A complete text covering the fundamentals of I.C. engines, especially recommended to review air management. |
| Chapter                      | 5,1 – Intake Manifold<br>5,2 – Volumetric Efficiency of SI Engines<br>5,6 – Supercharging and Turbocharging |
| Author                       | W. Pulkrabek  |