



Escola Tècnica Superior d'Enginyeries  
Industrial i Aeronàutica de Terrassa

UNIVERSITAT POLITÈCNICA DE CATALUNYA

# Preliminary Survey of a Rocket Engine for a Microsatellite Launcher

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TFG - BUDGET

09/01/2015

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**Degree:** Grau en Enginyeria en Tecnologies Aeroespacials

**Academic course:** 2014-2015/1

Item	Quantity	Unitary Cost (€)	Cost (€)
<b>Undergraduate Labor costs</b>	300 man-hours	10 €/h	<b>3000</b>
<b>Software</b>			
Rocket Propulsion Analysis License	1 u	166	<b>166</b>
<b>Consulted Bibliography</b>			
Modern Engineering for Design of Liquid-Propellant Rocket Engines. ISBN 1-56347-013-6	1 u	90.39	<b>90.39</b>
Rocket Propulsion Elements. ISBN 978-0-470-08024-5	1 u	83.66	<b>83.66</b>
History of Liquid Propellant Rocket Engines. ISBN 1-56347-649-5	1 u	61.82	<b>61.82</b>
International Reference Guide to Space Launch Systems. ISBN 1-56347-591-X	1 u	56.11	<b>56.11</b>
<b>Computer Amortization</b> (1000 € spread over 36 months)	3 months	27.78 €/month	<b>83.34</b>
<b>TOTAL</b>			<b>3,541.33 €</b>