

UNIVERSITAT POLITÈCNICA DE CATALUNYA



**STUDY OF CASSINI AND NEW HORIZONS TRAJECTORIES
USING JPL SPICE LIBRARY**

BUDGET

*A thesis submitted by Roger Sala Marco for the BSc Degree in Aerospace Vehicle
Engineering*

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Chapter 1

Budget

In this chapter the author will compile all the costs and expenses that have been involved on this project. It must be borne in mind that all the data that can be seen in the Table 5.1 are approximations.

In general, the costs of this project have been personal expenses and the electricity of the computers as you can see in the table (insert table number). You can also see that a MATLAB license is included since it is the program with which it has been worked, although for the author of the project it has been free for being a UPC student.

Concept	Amount	Unit cost	Atributed
Engineering work	555 h	15 €/h	8.325 €
Matlab license	1 u.	800 €/u	800 € ¹
Transport	4 trips/week	4 €/trip and 18 weeks	288 €
Electricity consumption	60 W / 600 h	0.18 €/(kW·h)	6 €
Total cost	-	-	9.419 €

Table 1.1: Budget

¹ This concept is not applicable in this project since the author is a student from the UPC

As you can see in the table, it has been assumed that the hourly wage of a junior engineer is about 15 €/h to obtain a first approximation of the *Engineering work*.

The trips have to be understood as train trips from Barcelona, from where the author is, to Terrassa, which is where the ESEIAAT is and where the author and the teamwork met twice per week. It leads to a total of two round trips per week costing 4 € each ticket for a total of 18 weeks.