

**16.810**

Engineering Design and Rapid Prototyping  
 Dept of Aeronautics & Astronautics  
 Massachusetts Institute of Technology

**IAP 2005**

Prof. O. de Weck  
 A. Bell, C. Graff

January 3, 2005  
 Version 1.1

**Cost Estimation Sheet**

To be submitted by each team by: January 25, 2005

Section		Rate	Qty	Total Cost
<b>I. Design and Engineering</b>				
	Labor Rate for each Designer	\$75/hour		
	Labor Rate for CAD/CAM workstation	\$40/hour		
<b>II. Materials Costs</b>				
	Aluminium Sheet	0.125 in. thick	\$50/sheet	
		0.250 in. thick	\$125/sheet	
	Aluminum Rod - 4-ft length		\$5 per length	
<b>III. Foam Wing Manufacturing</b>				
	Foam Sheet (24"x48"x2" thick)		\$35/sheet	
	Labor Rate		\$40/hour	
	Machine Use (operates at 1560 watts)		\$70/KW-hour	
<b>IV. Waterjet Manufacturing</b>				
	Labor Rate		\$55/hour	
	Machine Use		\$75/hour	
<b>V. Other Manufacturing</b>				
	Fiberglass Labor Rate		\$35/hour	
	Other Miscellaneous Work Labor Rate		\$30/hour	
<b>VI. Assembly and Testing</b>				
	Assembly Work Labor Rate		\$55/hour	
	Wright Brother's Wind Tunnel Operating Cost		\$300/hour	
			Hours	Cost:
Total:				

Please use this cost estimation sheet to compile the number of hours spent on the specific parts of the project. Also, please compile the total costs associated with the project at the specified labor rates. If there are any questions, please direct them to the TA's.