

## ASSIGNMENT

### MSc MAJOR PROJECT (BMEGEÁTMWD1)

Title: **Construction and testing of a small test section wind tunnel**

Author's name (code): **Péter KURDI (JDN8CN)**

Curriculum : MSc in Mechanical Engineering Modelling / Fluid Mechanics

Supervisor's name, title: **Márton BALCZÓ**, assistant research fellow

Affiliation: Department of Fluid Mechanics / BME

Description / tasks of the project: The Department of Fluid Mechanics is in need of small test section wind tunnels for educational purposes. Such a tunnel has been designed in the previous semester with  $v_{\max} = 23$  m/s, 0.35×0.35 m test section. Current major project will cover the installation and testing of the tunnel, including the review of the construction and if needed, its redesign based on measurement results. During the final project the design and installation of accessories and the build-up of another similar wind tunnel is planned. If possible, force measurement equipment and test bodies have to be constructed.

1. Literature review on wind tunnel design and construction
2. Installation of the wind tunnel from the components already manufactured
3. Testing of the wind tunnel: basic parameters and flow homogeneity measurements using Pitot static tube or hotwire anemometry
4. If necessary, redesign of the tunnel should be performed, after which repeated measurements should prove the effectiveness of the redesign.

Handed out / Deadline: **6<sup>th</sup> of February 2012.** / **14<sup>th</sup> of May 2012.**

Budapest, 6<sup>th</sup> of February 2012.

(L.S.)

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Dr. János VAD, associate professor  
Head of Department

Received by:  
Budapest, 6<sup>th</sup> of February 2012.

The undersigned declares that all prerequisite subjects of the Major Project have been fully accomplished. Otherwise, the present assignment for the Major Project is to be considered invalid.

.....  
student



<p><b>Supervisor's declaration of acceptance:</b></p>	<p>The submitted Project Report fulfils all requirements of the Department of Fluid Mechanics, Budapest University of Technology and Economics.</p>
<p><b>Supervisor's proposal for final grade of the thesis:</b></p>	<div style="border: 1px solid black; padding: 10px; margin: 10px auto; width: 80%;"> <p>The proposed final grade* of the Project Report:</p> <p>.....</p> </div> <p>* Please, select one: excellent (5), good (4), medium (3), acceptable (2), fail (1)</p>
<p><b>Date:</b></p>	<p>Budapest, 14th of May, 2012.</p>
<p><b>Name / Signature:</b></p>	<p>..... Márton BALCZÓ, assistant research fellow supervisor</p>

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