



# FINAL PROJECT ASSIGNMENT

**CLASSIFIED**

<b>Identification</b>	Name: <b>Papp Martin</b>		ID: <b>79537291201</b>	
	Code of the Curriculum: <b>2N-MW0</b>		Specialisation:	Document ref. number:
	Curriculum: <b>Gépészeti modellezés mesterképzési szak</b>		<b>2N-MW0-FM</b>	<b>GEÁT:2020-1:2N-MW0:V462RY</b>
	Final Project issued by: <b>Department of Fluid Mechanics</b>		Final exam organised by: <b>Department of Fluid Mechanics</b>	
Supervisor: <b>Dr. Tamás Benedek (76511246251), assistant professor</b>				

<b>Project Description</b>	<b>Titée</b>	<b>Design Modifications to Influence Curve Instability of Multistage Centrifugal Pumps</b> Geometriai módosítások hatása többfokozatú centrifugál szivattyúk instabilitására
	<b>Details</b>	1. Overview of the literature special regards on centrifugal pumps, CFD simulation of centrifugal pumps and the phenomena of rotating stall! 2. Overview of the results of the investigated machine's previous CFD simulations! 3. Perform modification on the selected pump's CAD model based on the results of the previous CFD simulations! 4. Create the numerical mesh of the modified pump geometries for CFD simulations! 5. Perform CFD simulation of the modified pump geometries in order to investigate their effects on the pump curve instability! 6. Evaluate the results, and summarize the work in the required document format!
	<b>Advisor</b>	Advisor's Affiliation: Flowserve Hungary Services Ltd. 4028 Debrecen, Vágóhid útca 2. Advisor: Martijn van der Schoot, Engineering Specialist in Hydraulics

<b>Final Exam</b>	1 <sup>st</sup> subject (group)	2 <sup>nd</sup> subject (group)	3 <sup>rd</sup> subject (group)	4 <sup>th</sup> subject (group)
	<b>ZVEGEÁTMW02</b> Computational Fluid Dynamics	<b>ZVEGEÁTMW03</b> Flow Measurements	<b>ZVEGEÁTMW08</b> Building Aerodynamics	<b>ZVEGEÁTMW19</b> Aerodynamics and Its Application for Vehicles

<b>Authentication</b>	Handed out: <b>15 September 2020</b>		Deadline: <b>11 December 2020</b>			
	Compiled by: <b>Dr. Tamás Benedek (76511246251)</b> Supervisor		Verified by: <b>Dr. János Vad (signed)</b> Head of Department		Approved by: <b>Dr. Péter Bihari (signed)</b> Vice-Dean	
	The undersigned declares that all prerequisites of the Final Project have been fully accomplished. Otherwise, the present assignment for the Final Project is to be considered invalid.  ..... <i>Papp Martin</i>					