

Faculty of Mechanical Engineerin

Department of Fluid Mechanics http://www.ara.bme.hu/

## FINAL PROJECT ASSIGNMENT

## **Publicly Available**

-	Name: Stadler Elizabet				ID: <b>73604298569</b>			
dentification	Code of the Curriculum: 2N-MW0		Specialisation:		Document ref. number:			
	Curriculum: Gépészeti modellezés mesterképzési szak		2N-MW0		GEÁT:2022-2:2N-MW0:GG5GQV			
	Final l	Project issued by:	Final exam organised by:					
		Department of Fluid Mechanics	Department of Fluid Mechanics					
Ι	Supervisor: Dr. Kalmár-Nagy Tamás (71567010352), associate professor							
Project Description	tle	Experimental and computational determination of lift and turbulence generated by drones						
	Ti	Drónok által generált felhajtóerő és turbulencia meghatározása kísérlettel és számítással						
	Details	1. Detailed literature survey and analysis of relevant resources of technical literature						
		2. Measurement of blade lift coefficients with wind tunnel measurements						
		3. Creating a safety protocol for wind tunnel drone testing and implementing safety features						
		4. Creating a platform design for wind tunnel drone tests						
		5. Measurement of turbulence generated by moving quadrotor blades investigated in the						
		departmental wind tunnels with PIV (Particle Image Velocimetry) method and with the help of CFD						
		(Computational Fluid Dynamics)						
		6. Summarize the work in the required document format of the MSc Thesis						
	Advi- sor	Advisor's Affiliation:						
		Advisor:						

-	1 <sup>st</sup> subject (group)	2 <sup>nd</sup> subject (group)	3 <sup>rd</sup> subject (group)	4 <sup>th</sup> subject (group)	
Final Exan	<b>ZVEGEÁTNW02</b> Computational Fluid Dynamics	<b>ZVEGEÁTNW03</b> Fluid Mechanics Measurements	<b>ZVEGEÁTNW08</b> Building and Environmental Aerodynamics	<b>ZVEGEVGMW08</b> Theoretical Acoustics	

	Handed out: 14 February 2022		Deadline: 20 May 2022		
u	Compiled by:	Verified by:		Approved by:	
	Dr. Kalmár-Nagy Tamás (71567010352) Supervisor	<i>Dr. János Vad</i> (signed) Head of Department		<i>Dr. Gábor Györke</i> (signed) Vice-Dean	
Authenticatic	The undersigned declares that all prerequisites of the Final I have been fully accomplished. Otherwise, the present assignm the Final Project is to be considered invalid.				