



FINAL PROJECT ASSIGNMENT

Publicly Available

Identification	Name: Mammadli Tural		ID: 73360935366	
	Code of the Curriculum: 2NAAG0		Specialisation:	Document ref. number:
	Curriculum: Bachelor of Science Degree Program in Mechanical Engineering		2NAAG0-PE	GEÁT:2022-2:2NAAG0:SZYLS6
	Final Project issued by: Department of Fluid Mechanics		Final exam organised by: Department of Hydrodynamic Systems	
Supervisor: Dr. Farkas Balázs (71421842963) , assistant professor				

Project Description	Title	Numerical study on thermal energy harvester for wireless sensor networks Érzékelőhálózatokhoz fejlesztett termikus energiafejlesztő numerikus vizsgálata
	Details	<ol style="list-style-type: none">1. Surveying and analysing relevant resources of technical literature2. Identify the challenges of CFD calculations associated with the thermal energy harvester based on the results of the literature research3. Based on the above, identify and evaluate the parameters based on their expected effect on the performance of the thermal energy harvester4. Identify the necessary numerical domain and boundary condition for the investigation5. Create a simplified model of the system considering only internal conduction6. Extend model to include radiation and convective heat transfer with the environment7. Perform simulations and optimise the design of the system8. Summarize your work in the required document format of the BSc Thesis
	Advisor	Advisor's Affiliation: Dept. Fluid Mechanics, Fac. Mech Eng, Budapest University of Technology and Economics 1111 Budapest, Bertalan Lajos 4-6. Advisor: Dr. Joshua Patrick Davidson , assistant professor

Final Exam	1 st subject (group)	2 nd subject (group)	3 rd subject (group)
	ZVEGEENAG71 Energy Processes and Equipments	ZVEGEVGAGFF Fluid Flow Systems	ZVEGEVGAG4X Volumetric Pumps and Compressor

Authentication	Handed out: 14 February 2022		Deadline: 20 May 2022			
	Compiled by: Dr. Farkas Balázs (71421842963) Supervisor		Verified by: <i>Dr. János Vad</i> (signed) Head of Department		Approved by: <i>Dr. Gábor Györke</i> (signed) 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>Mammadli Tural</i>					