



Company Information

Company Name	<i>Electrolux</i>	Date Submitted	<i>11/08/2022</i>
Project Title	<i>Bitumen Free Residential Dishwasher – Phase 2 (ELEC_NOISE2)</i>	Planned Starting Semester	<i>Spring 2023</i>

Senior Design Project Description

Personnel

Typical teams will have 4-6 students, with engineering disciplines assigned based on the anticipated Scope of the Project.

Please provide your estimate of staffing in the below table. The Senior Design Committee will adjust as appropriate based on scope and discipline skills.

Discipline	Number	Discipline	Number
Mechanical	3	Electrical	
Computer		Systems	1
Other ()			

Company and Project Overview:

Company: Electrolux shapes living for the better by reinventing taste, care and wellbeing experiences, making life more enjoyable and sustainable for millions of people. As a leading global appliance company, we place the consumer at the heart of everything we do. Through our brands, including Electrolux, AEG, Anova, Frigidaire, Westinghouse and Zanussi, we sell more than 60 million household and professional products in more than 150 markets every year.

Electrolux has been doing business since 1919. The global headquarter is in Stockholm, Sweden and its North American headquarter is in Charlotte, NC. The following products are sold in North America under the Electrolux and Frigidaire brand.



Project: The project will focus on designing alternatives to the current Bitumen material used for sound dampening and thermal insulation to increase the recyclability of the dishwasher. The current Bitumen material is difficult to remove from the stainless-steel cavity thus preventing the cavity to be recycled. This project is a continuation of the 2022 project “Noise Reduction of a Residential Washer”.

Project Requirements:

Continue the development of alternative materials to replace Bitumen.

Design Requirements:

- Easily removed from stainless-steel cavity
- Provide equal thermal insulation as Bitumen
- Provide equal sound reduction as Bitumen
- \$30 or less material cost

Expected Deliverables/Results:

- Functional prototype with proposed design
- Test data showing parity with respect to sound and thermal performance
- Cost estimate
- Manufacturing considerations (assembly, application)
- Recycling analysis

Disposition of Deliverables at the End of the Project:

The prototype, test data and all intellectual property will be delivered to Electrolux at the completion of the project.

List here any specific skills, requirements, specific courses, knowledge needed or suggested (If none please state none):

SEGR 4141 (Engineering Experimental Design) for SEGR student