## ME420 Mechanical Engineering Individual Research Project (2024/25)

## PROJECT SELECTION FORM

Name

: Jayasinghe P.M.K.K.

Reg no.

: E/19/161

Name of Supervisor

: Dr. Lalith N. Wickramarathna

Title of the project

: Development of a small to medium size dough kneading machine

Scope of the project (what exactly is to be done in the project):

1. Review different kneading operational techniques

2. Design a kneading machine with an emphasis on affordability, simplicity of operation, and mobility, catering to entrepreneurs of varying technical expertise

3. Fabrication of the kneading machine

4. Performance evaluation of the machine's average capacity, with a specific focus on assessing kneading machine mass and speed efficiencies

Expected final outcome (what is the expected end result):

Design and development of an affordable, user-friendly dough kneading machine

Important milestones hoping to be achieved (which should be measurable) during the project:

- 1. Identify the optimum mechanism for dough kneading process
- 2. Design the configuration for each component of the machine
- 3. Calculate dynamic parameters of the machine
- 4. Select the geometry and materials for the components
- 5. Fabricate the kneading machine
- Evaluate performance of the machine

Signature of the student

Name of the supervisor: LN Widthmuthy

Date: 24/11/2024