

I-STEM Software Request - Guide Approval Form

User Details

- **Name of Researcher:** Chhabishwar Prasad Patel
- **User Type:** [] Ph.D. Scholar [✓] Postdoctoral Researcher [] Bachelor's [] Masters
- **Institution Name:** Plaksha University
- **Institutional Contact No:** +91 172 412 6414
- **Research Topic:** Study of Thermal Energy Storage system for decarbonising air conditioning energy.

Software Request Details

- **Software Name:** COMSOL Multiphysics (Basic + Advanced Module)

Justification for Software Request: The TES tank under study involves complex heat transfer, fluid dynamics, and thermal stratification. COMSOL Multiphysics provides a versatile simulation platform capable of accurately modelling such coupled processes. It is especially valuable for the following objectives:

- Analyzing temperature distribution and thermal stratification inside the tank during charging and discharging cycles.
- Evaluating heat losses, energy efficiency, and design optimizations.
- Validating experimental data using numerical models

Guide/Supervisor Approval

I, Vishal Garg,

- Confirm that the above-mentioned researcher is affiliated with our institution
- Have reviewed the software request and its relevance to the researcher's academic work
- Approve the software request for research purposes

Approval Confirmation

- I approve the software request
- The software aligns with the researcher's research objectives
- The request meets the institutional research guidelines

Guide/Supervisor Signature: Vishal Garg

Date: 7/8/25

Official Stamp/Seal:

