

MANIPAL INSTITUTE OF APPLIED PHYSICS

(A Constituent Unit of MAHE, Manipal)

I-STEM Software Request - Guide Approval Form

User Details

Name of Researcher:	Arpit Kumar
User Type:	Bachelor's Student
Institution Name:	Manipal Institute of Applied Physics, MAHE Manipal
Institutional Contact No:	+91 72958 45814
Research Topic:	Multiphysics Modeling of Magnetic Field-Assisted Arsenic (As V) Removal in F

Software Request Details

Software Name: COMSOL Multiphysics (AC/DC, CFD, Chemical Reaction Engineering, Structural Mechanics, Optimization, CAD Import Modules)

Justification for Software Request:

The requested software is required to conduct advanced multiphysics simulations involving magnetic field interaction with ionic species in flowing water. The research includes magnetostatic field modeling, Navier–Stokes fluid dynamics, ionic transport (Nernst–Planck equations), Lorentz force coupling ($\mathbf{J} \times \mathbf{B}$), and design optimization of magnetic flow chambers. This software is essential to validate theoretical and numerical models related to magnetic field-assisted arsenic mitigation systems.

Guide / Supervisor Approval

I, _____ (Guide / Supervisor Name), confirm that the above-mentioned researcher is affiliated with our institution. I have reviewed the software request and its relevance to the researcher's academic work and approve the software request for research purposes.

Guide / Supervisor Signature:	_____
Date:	_____
Official Institutional Stamp / Seal:	_____