

Petition for candidacy, M.Sc. in Materials Science and Engineering with a Concentration in Materials Theory and Simulation

The concentration in Materials Theory and Simulation (MTS) allows candidates for the M.Sc. in Materials Science and Engineering to gain deeper preparation in materials theory and simulation. In the concentration, the twelve (12) points of electives required for the M.Sc. degree are oriented towards theory and simulation. Thus in addition to the eighteen (18) points of core courses required for the Materials Science and Engineering degree,

- MSAE4100:** Crystallography
- MSAE4200:** Theory of crystalline materials: phonons
- MSAE4201:** Materials thermodynamics and phase diagrams
- MSAE4202:** Kinetics of transformations in materials
- MSAE4206:** Electronic and magnetic properties of solids
- MSAE4215:** Mechanical behavior of structural materials

the following twelve (12) points of electives are required:

- MSAE4203:** Theory of crystalline materials: electrons
- MSAE6085:** Computing the electronic structure of complex materials
- APMA4300:** Introduction to numerical methods
- MSAE6273:** Materials science reports

where MSAE6273 will be completed on a computational or theoretical project supervised by one of the MSAE faculty interested in theory and/or simulation. A partial list of interested MSAE faculty includes Profs. Bailey, Billinge, Marianetti, Noyan, and Wentzcovitch.

Petitions for candidacy will be considered *no earlier than* January 1 after the first semester of study and should be submitted no later than May 31 after the second semester of study.

Candidates are required to provide 1) the **signature** of a faculty member willing to supervise their computational or theoretical project, MSAE6273, and 2) a report of GPA after the first semester. Students with GPA lower than 3.2 are discouraged from (but not excluded from) petitioning. Students remain candidates for the M.Sc. with concentration only as long as they make good progress towards satisfaction of the concentration requirements.

To be filled out by the student and submitted to the academic advisor

I would like to petition for candidacy in the M.Sc. program in Materials Science and Engineering with a Concentration in Materials Theory and Simulation.

Student name _____ uni _____ (date) _____

My cumulative GPA is ____ after ____ semesters.

Research units will be supervised by Prof. _____ (faculty signature) _____

Approved, academic advisor _____ (date) _____

Approved, program chair _____ (date) _____