Course Description
Mathematical modeling of physical systems, with emphasis on the reading and presentation of research papers. Addresses a broad range topics, with particular focus on applied physics in continuum systems: fluid dynamics (e.g. animal locomotion), active matter (e.g. collective behavior, active networks), biophysics (e.g. pattern formation, quorum sensing, disease spreading), hydrodynamic quantum analogs (e.g. walking droplets), etc. Other subjects will be also considered, e.g. the mathematics of gambling and stock markets, artificial intelligence, etc.

For further information, contact psaenz@mit.edu