SCIENTIFIC COMPUTING (SCMP)

SCMP 559 Multiscale Modeling of Chemical Systems
This course provides theoretical, conceptual, and hands-on modeling experience on three different length and time scales - (1) electronic structure (Å, ps); (2) molecular mechanics (100Å, ns); and (3) deterministic and stochastic approaches for microscale systems (um, sec). Students will gain hands-on experience, i.e., running codes on real applications together with the following theoretical formalisms: molecular dynamics, Monte Carlo, free energy methods, deterministic and stochastic modeling.
Course not offered every year
Also Offered As: BE 559, CBE 559
Prerequisites: Undergraduate courses in numeral analysis and statistical mechanics.
Activity: Lecture
1.0 Course Unit

SCMP 597 Master’s Thesis Research
For students working on advanced research leading to the completion of a master’s thesis.
One-term course offered either term
Activity: Masters Thesis
1.0 Course Unit

SCMP 599 Master’s Independent Study
For Scientific Computing master’s students. Involves coursework and class presentations. The project will invariably include formally gradable work comparable to that of a CIS 500 level course. Students should discuss with the faculty supervisor the scope of the independent study, expectations, work involved, etc.
One-term course offered either term
Activity: Independent Study
1.0 Course Unit

SCMP 990 Masters Thesis
For Master’s students who have completed the course requirements for the Master’s degree and are strictly working to complete the Master’s Thesis leading to the completion of a Master’s degree. Permission Required.
One-term course offered either term
Activity: Masters Thesis
1.0 Course Unit