George Mason University
Graduate Course Approval/Inventory Form

Please complete this form and attach a copy of the syllabus for new courses. Forward it as an email attachment to the Secretary of the Graduate Council. A printed copy of the form with signatures should be brought to the Graduate Council Meeting. Complete the Coordinator Form on page 2, if changes in this course will affect other units.

Please indicate: ____ NEW  ____ MODIFY  ____ DELETE
(modification of the prerequisites and minor correction in the catalog description)

Local Unit: SCS  Graduate Council Approval Date:

Course Designation: CSI  Course Number: CSI 780

Full Course Title: Computational Physics and Applications

Abbreviated Course Title (24 characters max.): Computational Physics

Credit hours: 3  Program of Record: Ph.D. in Computational Sciences and Informatics

Repeatable for Credit?  ___ D=Yes, not within same term  Up to ___ hours maximum
 ___ T=Yes, within the same term  Up to ___ hours maximum
 ___ N=Cannot be repeated for credit

Activity Code (please indicate):  ___ Lecture (LEC)  ___ Lab (LAB)  ___ Recitation (RCT)
 ___ Studio (STU)  ___ Internship (INT)  ___ Independent Study (IND)  ___ Seminar (SEM)

Catalog Credit Format  3: 3: 0  Course Level: GF(500-600)  ___ GA(700+)  ___
Maximum Enrollment: 20  For NEW courses, first term to be offered:

Modifications: Prerequisites, catalog description.

Prerequisites: PHYS 502; FORTRAN, C, or C++ programming; or permission of instructor.

Catalog Description (35 words or less): Covers application of numerical methods to the study of a variety of physical systems, with emphasis on modeling and simulation. Development of numerical algorithms and simulation codes used to gain understanding of the mechanisms and processes taking place in physical systems. Includes several projects that are drawn from such areas as atomic and molecular interactions, molecular dynamics, lattice dynamics, quantum systems, chaos, percolation, random walks, aggregation mechanisms of soft solids, nanomaterials, and nonlinear dynamics.

APPROVAL SIGNATURES:
Submitted by:  ________________________________ email: ________________
Department/Program:  ________________________________ Date: __________________
College Committee:  ________________________________ Date: __________________
Graduate Council Representative:  ________________________________ Date: __________________
Approval from other units:

Please list those units outside of your own who may be affected by this new, modified, or deleted course. Each of these units must approve this change prior to its being submitted to the Graduate Council for approval.

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Graduate Council approval: __________________________ Date: __________

Graduate Council representative: __________________________ Date: __________

Provost Office representative: __________________________ Date: __________